Biological influences

Phenylketonuria

That's PKU to you and me, fortunately.

PKU is a genetic disorder – it is caused by a mutation in a single gene. Someone with PKU cannot process a particular chemical in food. Historically, babies born with PKU would have developed several symptoms including severe learning difficulties caused by brain damage.

But what do chickpeas have to do with this?

The answer is aquafaba, the 'juice' in tins of chickpeas. A baby who tests positive for PKU is put on a life-long restricted diet that removes high-protein foods (e.g. eggs, dairy) and reduces many others. Aquafaba can be used to replace egg whites in cooking (vegans use it too).

PKU shows us how genes usually work. Many people think that if you inherit a gene for a disorder, then you are bound to get the disorder. This is very far from the truth.

Inheriting the PKU gene is a *biological* influence (or 'nature'). But the restricted diet is an *environmental* influence (or 'nurture'). So the gene does not determine the outcome on its own. Instead, the two influences interact. The gene predisposes the individual to develop symptoms of PKU, but whether this happens or not depends on an environmental influence.

In short, just because something is 'genetic' does not mean it is inevitable.

Specification terms

Health and **Ill health** Defined on page 10.

Genes Units of inheritance. They consist of chemical instructions (DNA) which tell your body what proteins to manufacture – and basically that is what you are, a huge number of proteins. Genes are inherited from parents and contribute to the development of an individual's physical and psychological characteristics.

Neurotransmitter A chemical (e.g. serotonin) in the brain and nervous system that transmits signals from one neuron to another across synapses.

Genetic predisposition

What is a genetic predisposition?

The *genes* we inherit from our parents contribute to our health (and illness) but do not determine it. This is because an individual does not inherit a gene 'for' health or 'for' an illness (though there are some rare exceptions).

Instead, people inherit a predisposition that makes them more or less likely to be healthy (or become ill). But becoming ill is not inevitable and depends upon other factors that act as a 'trigger', such as smoking or being exposed to a virus. Not everyone who smokes or is exposed to a virus becomes ill and one of the factors in this is their genetic disposition.

Genetic influences on health and illness

Genes affect the likelihood we will engage in physical activity and therefore be healthier. One study of twins found that genes account for 62% of the variation in engaging in physical exercise (Stubbe *et al*. 2006). This means that people with certain genes are much more likely to take physical exercise than people without those genes.

Genetic factors also influence health by contributing to illness.

Physical illness Obesity is a physical disease influenced by a genetic predisposition. Twin studies show that body mass index (BMI) is much greater in both individuals in identical twin pairs than in non-identical twin pairs (e.g. Maes *et al*. 1997). This indicates that there is a strong genetic influence on obesity.

Mental disorders Several psychological disorders have a genetic basis, i.e. they run in families. For example, research with twins and other family members suggests that depression is about 37% inherited (Sullivan *et al*. 2000).

This percentage suggests that other factors are important too. In other words, there is a genetic predisposition to develop depression but environmental events affect whether or not someone does get depressed.

Roles of neurotransmitter imbalances

What are neurotransmitter imbalances?

As we saw in Book 1, *neurotransmitters* are chemicals that allow communication between neurons. Usually, most neurotransmitters in the nervous system are 'in balance', with levels neither too high nor too low. However, for many reasons (genetics, stress, etc.) levels can become imbalanced, with various effects on behaviour depending on whether the levels are too high or too low.

Physical health and serotonin

One reason why physical activity improves health is through its effect on serotonin. Serotonin is increased in several areas of the brain by both short, intense exercise (overtraining) and longer-term moderate exercise (Lin and Kuo 2013), improving sleep quality, alertness and digestion.

Mental health and neurotransmitters

High levels of dopamine are associated with feelings of happiness and optimism (i.e. a positive outlook on life) (Mitchell and Phillips 2007).

Depression has long been linked to low levels of serotonin. One cause of this may be genetic. Some people inherit a gene which causes lower amounts of serotonin than other people. Some antidepressant drugs work by increasing serotonin levels, usually reducing symptoms of depression so that the person becomes less depressed.

Evaluation

Support for genetic predisposition

One strength of the genetic predisposition explanation is that it includes a role for non-genetic factors.

One example in the context of illness is PKU (see intro to this spread). An example in terms of mental health is resilience, the ability to adapt to life's problems. Julia Kim-Cohen and Andrea Gold (2009) suggest that some people inherit genes that make them more resilient, but they also have supportive relationships with other people. So resilience has a genetic basis but it depends on environmental circumstances as well.

This interaction between genes and environment shows that genes predispose people to health and ill-health but do not necessarily cause (determine) them.

Practical applications

One other strength is that knowledge of neurotransmitter imbalances has led to practical ways of improving health.

For example, a recommendation for treating mild depression is a structured physical activity programme (a 'low-intensity psychosocial intervention') rather than using antidepressant drugs (NICE 2009). Such physical activity increases serotonin levels and improves symptoms without the potential side effects of drugs.

Therefore, although genes cannot be altered, lifestyle and environmental changes can reduce the risk of disease and improve health in people with a genetic predisposition.

Incomplete explanation

One weakness is that emphasising biological influences oversimplifies the causes of health.

For example, genetic predisposition is indirect rather than direct. It does not influence behaviour directly but influences lifestyle-related behaviours (e.g. exercise, smoking, diet) which in turn affect the likelihood of an individual being healthy or ill.

Therefore, the causes of health are complex and biological influences are not a complete explanation.

GET ACTIVE Measure your quality of life

How healthy you are has a significant impact on how satisfied you feel about life. Psychologists call this health-related quality of life (HRQoL) and there are several ways you can measure it. Measurement is based on self-report – you are the expert on how you think and feel.

The 'gold standard' method is a questionnaire called the SF-36 which you can find here: tinyurl.com/ttwv2bn2 (there is a printable version here: tinyurl.com/kfdt6bbf).

1. *Did your scores reflect how you feel about life?*
2. *How could this questionnaire be used practically?*
3. *The SF-36 is useful but it has weaknesses. Can you think of **one** or **two** weaknesses?*

Exercise has so many physical and psychological benefits that it is increasingly prescribed for mild depression.

Exam-style questions

Quinn is a fitness fanatic. He goes to the gym every day and exercises at other times as well. He has never smoked and he is careful with his diet. His last medical check-up found he was physically very healthy.

However, Quinn knows that there is a history of heart attacks in his family although many of his relatives, including his parents, are overweight and do not exercise.

1. Explain how genetic predisposition may play a role in Quinn's health. (3 marks)
2. Assess the role of genetic predisposition in Quinn's health. (3 marks)
3. Quinn does have periods when he is severely depressed. He has had to take time off from his very stressful job. Quinn found out recently that his mother and brother had been diagnosed with depression.

   Briefly explain what is meant by the term 'neurotransmitter imbalances'. (2 marks)
4. Explain the role neurotransmitter imbalances might have in Quinn's health. (2 marks)
5. Assess neurotransmitter imbalances as an explanation for Quinn's health. (3 marks)
6. Identify **two** biological influences on health. (2 marks)
7. Analyse **two** biological influences on Quinn's health. (9 marks)

An issue to consider

Some people think the idea that our health depends on levels of chemicals in our brains reduces us as humans to nothing more than biological machines, without power to direct our own behaviour.

What do you think?

Specification content

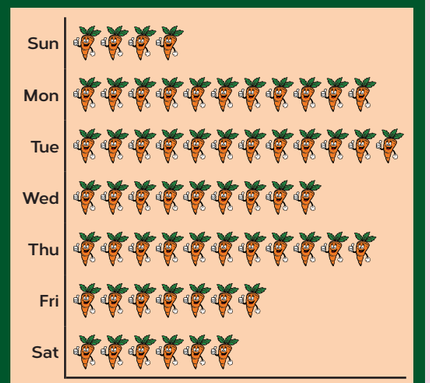
A2 Psychological approaches to health

Learners will explore psychological approaches to health and suggest how these could be applied to different scenarios.

Biological influences:

- Genetic predisposition.
- The roles of neurotransmitter imbalances.

Behaviourist approaches



Carrot or stick?

I (Rob) have got one of those desks that goes up and down (when you want it to – I mean, it doesn't just go up and down constantly).

Sitting down all day is bad for you, so I wanted to try and stand up more often while I worked. Thing is, you can get the desk but you still have to use it standing up. It's not magic. Sitting down is a lot more rewarding because it's more comfortable.

So I got this app called CARROT, which welcomed me with the words: *'Greetings lazy human, I am your new taskmaster.'*

Every time I use the desk standing up, the app rewards me with a carrot – a GIF of a carrot to be precise. But if I make CARROT angry by not standing, I get a stick instead. These get plotted on a graph like the one above, so I can feel good about how I'm doing.

'Why would a grown man find a picture of a carrot rewarding?' I hear you ask.

Good question. It might just be me.

Specification terms

Cues In the context of learning, cues are stimuli in the environment that become rewarding in themselves because they are associated with the pleasure experienced from engaging in a behaviour.

Negative reinforcement In operant conditioning, the process of learning in which a behaviour is more likely to be repeated because it leads to escape from an unpleasant situation – the escape is rewarding.

Operant conditioning A form of learning in which behaviour is learned and maintained by its consequences. If the consequence of a behaviour is pleasurable this increases the likelihood that the behaviour will be repeated (i.e. the behaviour has been learned).

Positive reinforcement In operant conditioning, the process of learning in which a behaviour is more likely to be repeated because it is pleasurable – the pleasure is rewarding.

Role of reinforcement

Healthy and unhealthy behaviours can be explained by a combination of positive and negative reinforcement.

Positive reinforcement

Positive reinforcement occurs when the consequences of a behaviour are rewarded. The reward reinforces the behaviour and makes it more likely to happen again.

For example, a person who does ten minutes of physical exercise may experience a sense of happiness from naturally-occurring brain chemicals that are released when exercising. So the person exercises again the next day to repeat the pleasurable experience (they are learning to do this behaviour). Unhealthy behaviours such as sitting on the sofa watching TV are also positively reinforced, for example by the pleasure we get from watching a programme we enjoy.

Negative reinforcement

Negative reinforcement occurs when avoidance of an unpleasant consequence of a behaviour is rewarded. This reinforces the behaviour and makes it more likely to recur.

For example, if someone thinks about missing their regular exercise session, they may experience uncomfortable feelings of guilt or hopelessness. Engaging in the exercise avoids these feelings and this is rewarding, reinforcing the exercising behaviour. Likewise, sitting on the sofa avoids the effort and sweatiness of exercising, so an unpleasant consequence is averted and an unhealthy behaviour is reinforced.

Role of cues

Healthy and unhealthy behaviours become associated with particular stimuli called *cues*. For example, there are certain items often present when someone smokes a cigarette, such as a lighter. The pleasurable reward for smoking (relaxation, reduced anxiety, etc.) is reinforcing. The lighter becomes associated with this pleasure, and eventually produces a similar physiological and psychological response on its own. The lighter has become a cue.

Cues are important in healthy behaviours. During physical exercise, we might wear a particular item of kit, which becomes associated with the pleasure experienced from exercising. Just seeing the kit makes the person feel happier.

Using operant conditioning

Let's look at the example of using *operant conditioning* to encourage and incentivise people (i.e. give people incentives) to eat a healthy diet.

Using positive reinforcement

External feedback can provide positive reinforcement for most people, e.g. praising someone for eating fruit and veg. Achieving goals or targets is also positively reinforcing. Self-talk is an effective internal replacement for feedback – you encourage yourself to reach a goal and praise yourself when you reach it.

Reinforcement should be chosen carefully and tailored to the individual. Not everyone responds readily to praise, for instance.

Using negative reinforcement

Using negative reinforcement is based upon avoidance of unpleasant outcomes. Eating unhealthy foods might provoke guilt, so eating healthily is a good way to avoid such unpleasant feelings.

For any type of reinforcement – positive or negative – it is very important that the reinforcement occurs immediately after the desired behaviour or as close in time as possible.

Using punishment

Punishment is an aspect of operant conditioning but less effective than reinforcement. This involves applying an unpleasant consequence to an undesired behaviour (which means it is less likely to be repeated). For example, a child might be 'told off' for eating something unhealthy. (Note that punishment is not the same as negative reinforcement.)

Evaluation

Research support

One strength is research evidence supporting the effects of reinforcement.

Kelley Strohacker *et al.* (2014) reviewed studies into the use of incentives to encourage exercise behaviours (e.g. attendance at an exercise class). Incentives included cash or vouchers. Both positive and negative reinforcement increased exercise behaviours, compared with non-incentivised controls. This was true for children, young adults and middle-aged adults.

This suggests that reinforcement is an effective way of encouraging healthy behaviour, at least in the short term.

Practical applications

Another strength is that operant conditioning has real-world practical uses.

One intervention can be used with hospital inpatients who are not motivated to be physically active (e.g. people with cancer or with severe mental health disorders). Patients are given a plastic coin (or something similar) when they carry out a desired behaviour (e.g. being active). The coin has no value but can be exchanged for items such as treats – it is a reward that positively reinforces the physical activity. (Using coins or some other 'token' is a technique called a *token economy*.)

Therefore, operant conditioning can lead to healthier behaviours in people who may not benefit from other interventions.

Limited use

One weakness is that application of operant conditioning to healthy behaviour is limited.

This is because rewards for healthy behavioural changes may take a long time to appear. For example, a person may try to lose weight by dieting. In this case, the reward for dieting is weight loss at some point in the future. This is a very weak form of reinforcement which is often overwhelmed by competing short-term rewards for unhealthy behaviours, e.g. the pleasure we get from eating a chocolate cheesecake.

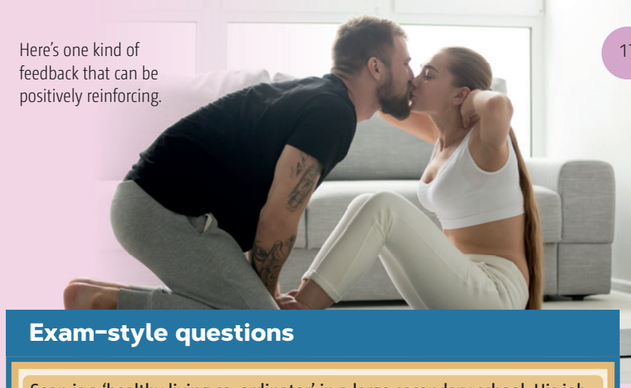
Therefore, operant conditioning may be a less effective way of encouraging healthy behaviours than other approaches (e.g. cognitive).

GET ACTIVE Block out the sun

Excessive exposure to the sun is a serious health risk because it can lead to skin cancer. There are some ways of reducing the risk that involve behaving in a healthier way. For example, by covering up, spending less time in the sun or using a high-factor sunblock.

Young children are usually protected by adults who use the above methods. But children eventually have to learn to do these things for themselves.

1. ***How could you use cues, positive reinforcement and negative reinforcement to encourage children to reduce their exposure to the sun?***
2. ***How can governments use reinforcement and/or cues to promote healthy behaviour?***



Here's one kind of feedback that can be positively reinforcing.

Exam-style questions

Sean is a 'healthy living co-ordinator' in a large secondary school. His job is to encourage students to engage more in healthy behaviours and less in unhealthy ones. In one programme, he gave free maths equipment to anyone who came to an exercise class. During the class he gave a lot of praise to the students for making an effort.

1. The behaviourist approach suggests that one reason for the development of healthy and unhealthy behaviours is positive reinforcement.
   State what is meant by the term 'positive reinforcement'. (1 mark)
2. Identify **one** way in which Sean used positive reinforcement. (1 mark)
3. In another programme, Sean wanted students to eat a healthier diet. He put up posters and gave out leaflets about the dangers of obesity, the risks to health and so on.
   Describe what psychologists mean by 'negative reinforcement'. (2 marks)
4. Explain how Sean's use of negative reinforcement could encourage the students to be healthier. (2 marks)
5. Sean identifies a group of students who smoke. He notices that they seem very attached to their lighters and some seem to enjoy rolling their own cigarettes.
   Explain the role of cues in the students' smoking behaviour. (2 marks)
6. Sean wants students to improve their mental health by helping them to be less stressed.
   Explain **two** ways in which Sean could use operant conditioning to encourage students to be less stressed. (4 marks)
7. Assess Sean's use of operant conditioning to encourage his students to be less stressed. (3 marks)
8. Discuss the effectiveness of Sean's use of behaviourist approaches to change the students' behaviour. (9 marks)

An issue to consider

Why do people continue to do things such as exercising and dieting when they do not enjoy them?

Specification content

A2 Psychological approaches to health

Learners will explore psychological approaches to health and suggest how these could be applied to different scenarios.

Behaviourist approaches:

- The role of cues, positive reinforcement and negative reinforcement to explain healthy and unhealthy behaviours.
- Using operant conditioning to encourage and incentivise behaviour.

Content area A2: Psychological approaches to health

Social learning approach

Do you have any role models?

The footballer Marcus Rashford has been a great role model for many people, both on and off the pitch. In 2021 he campaigned for free school meals to be extended during holidays and, in doing so, inspired many people to do something to help others.

For example, Zane Powles, an assistant headteacher in Grimsby, was inspired by Marcus to deliver over 7,500 meals to pupils' families.

Nine-year-old Jacob wanted to follow in Marcus's footsteps, so he started running to raise money for food charities. Jacob wasn't looking to be rewarded, but Marcus sent him a Playstation anyway.

Marcus's own role model is his mum Melanie, who worked at three jobs to put food on the family's table.

The desire to be like someone you look up to can be quite a powerful motivator.

Is there anyone you look up to, someone you admire and think 'I'd like to be more like them'?

Specification term

Role models People who have qualities we would like to have and we identify with. Therefore, we model or imitate their behaviour and attitudes.

Stephen Fry has campaigned to improve mental health and LGBTQ+ services.

Effects of parental role models

Modelling and imitation

You studied modelling in Unit 1 (in our Book 1). Modelling occurs when one person (the *role model*) performs a behaviour in the presence of someone else. For example, a parent (the role model) brushes their teeth in front of their child (the observer). The parent is modelling the behaviour of brushing teeth and this has an effect on the child's subsequent behaviour.

From the observer's perspective, modelling means imitating the role model's behaviour. In our example, when the child brushes their teeth in the same way as the parent, the child is modelling the behaviour.

Parents are powerful role models for health-related behaviours because they are 'nutritional gatekeepers' for their children. Parents provide opportunities for children to observe them eating. They decide what food their children eat. They communicate values and attitudes about food for children to imitate. When a parent regularly snacks on chocolate bars, serves pizza and chips for tea and pronounces crisps 'delicious', this has an effect on a child's food preferences.

Vicarious reinforcement

Modelling someone else's behaviour is most likely when there is *vicarious reinforcement*. You learned about vicarious reinforcement when you studied the behaviourist approach in Year 1. This occurs when an observer witnesses a model's behaviour being rewarded. For example, a child is rewarded vicariously when watching a parent enjoy eating a chocolate bar or enjoy exercising.

Both modelling and vicarious reinforcement are forms of social learning – we learn from observing others, especially when the other is having a positive experience (either through positive or negative reinforcement).

Effects of peer role models

A 'peer' is someone who is your 'equal' in terms of age, experience, interests etc. We identify with our peers because they are similar to us and, because of this identification, we model our behaviour on our peers. Imitation (modelling) the behaviour of peers occurs especially if others are having a positive experience.

Peer role models also have an effect on social norms. Peers establish that it is desirable or 'normal' to, for example, spend time doing physical exercise or smoking. So other members of the peer group imitate these attitudes.

Role models in health education

Peers

Health education programmes based in schools often enlist popular students to become role models for other students. 'Peer leaders' create and reinforce healthy lifestyle values and model positive health-related behaviours for others to imitate. The crucial advantage of using peers is credibility, which teachers and parents usually do not have with younger age groups.

Healthcare professionals

Nurses in particular are usually expected to model the health behaviours that are targets of health education. They have direct contact with people who would benefit most from education about healthy lifestyles, as well as helping to train future nurses.

Celebrities

Celebrities are sometimes recruited by campaigns promoting healthy behaviours, using the media as a channel to transmit the behaviour to be modelled. In 2021 there was widespread news footage of people such as Stephen Fry, the Kardashians and Kate Middleton receiving their COVID-19 vaccinations. Celebrities are imitated because they have status and glamour and we want to be like them.

Evaluation

Research support for modelling

One strength is that research shows that modelling can explain how healthy and unhealthy behaviours develop.

For instance, one study showed that children are more likely to sample a new food when they see an adult eating it rather than just being offered it (Cullen *et al.* 2000). Other positive health behaviours such as brushing teeth and doing physical exercise are associated with parental attitudes of 'Do as I do', which is superior to 'Do as I say'.

Therefore, parents who model healthy behaviours are more likely to raise children who engage in those behaviours themselves.

Practical applications

Another strength is that interventions based on modelling healthy behaviours are effective.

For example, ASSIST is a peer-led school-based intervention to prevent smoking in teenagers. Peer leaders have everyday informal conversations with other students about the risks of smoking and benefits of not smoking. Rona Campbell *et al.* (2008) found that smoking was lower in participants experiencing the ASSIST intervention compared with a control group (no intervention). ASSIST has also been successfully adapted into programmes to increase physical activity and promote sexual health.

This shows that peer role models can have positive effects on a range of health-related behaviours.

Issues with health education role models

One weakness is that some role models in health education are ineffective.

It is usually official policy in many healthcare systems for health educators (e.g. nurses and GPs) to be role models of healthy behaviour. But in practice some educators lead unhealthy lifestyles (e.g. they are obese). The consequence is that they have little credibility with patients who then may not follow advice to change their own lifestyles. On the other hand, some patients relate more easily to a healthcare professional who shares their struggles with unhealthy behaviours.

This suggests that modelling of behaviour in a health education context is more complex than official policies imply.

GET ACTIVE Modelling healthy behaviours

Getting young children to learn how to brush their own teeth is a very good example of the concepts on this spread.

The job is usually done by parents and/or older siblings, although health professionals such as school nurses and dentists might sometimes be involved.

The obvious way to teach a child this behaviour is to demonstrate it, i.e. to model it for the child to imitate.

It works even better when the parent (or whoever) seems to be enjoying brushing their teeth.

Choose another health-related behaviour and explain the effects of modelling and vicarious reinforcement.

Parents are powerful role models for their children in countless ways, especially in health-related behaviours like this one.

Exam-style questions

When Eli was a child, her parents ate a healthy diet with lots of fruit and veg at mealtimes around the table. Both her parents played in local football and rugby teams and Eli herself played in many of her school's sports teams.

1. Explain **one** effect of parental role models on Eli's behaviour. (2 marks)
2. When she was about 14, Eli became friends with some girls who began to smoke cigarettes. Eli would watch carefully whenever one of her friends lit up and began to draw on the cigarette and breathe in the smoke. Soon Eli started smoking too.

   Explain **one** effect of peer role models on Eli's behaviour. (2 marks)
3. Eventually Eli became a doctor. She gave up smoking, runs every day and drinks little alcohol. She feels an important part of her job is to educate her patients about healthy lifestyles.

   Describe how Eli might be a role model in health education. (3 marks)
4. Assess the usefulness of understanding Eli's behaviour in terms of the social learning approach to health. (3 marks)
5. Describe what psychologists mean by 'role models'. (2 marks)
6. Analyse the effectiveness of the social learning approach to explaining Eli's behaviour. (9 marks)

An issue to consider

We looked at operant conditioning on the previous spread. Which do you think is the superior way of encouraging healthy behaviour – operant conditioning or social learning – and why?

Specification content

A2 Psychological approaches to health

Learners will explore psychological approaches to health and suggest how these could be applied to different scenarios.

Social learning approach:

- Effects of parental and peer role models on healthy and unhealthy behaviours.
- Role models in health education.

Content area A2: Psychological approaches to health

Cognitive approach

It's the end of the world as we know it (and I feel fine)

It's midnight and you're sitting on a hilltop with a group of people you've known for a few months.

You're waiting to be picked up by aliens in a flying saucer at 2 am.

Why?

Because one of the group has had a message from the aliens warning you all that Earth is going to be destroyed by a massive flood. But if you wait on the hilltop, you'll be saved.

You've already removed all metallic objects. It's not clear why, but apparently metal could interfere with the UFO.

2 am comes and goes. Nothing. Someone else's watch says it's actually 1.55. That explains it – five minutes to go. But still nothing happens.

By 5 am you've all tried to work out why the end of the world hasn't come, including the psychologists who (unbeknownst to you) have been part of your group for weeks.

Some people are crying.

But eventually you find a resolution. Obviously you were right to expect the end to come. But the destruction has been averted, thanks to you and your demonstration of faith. Yes, that's it. That must be the explanation.

This (more or less) is how the psychologist Leon Festinger (one of the undercover psychologists) discovered cognitive dissonance.

Specification term

Cognitive dissonance An explanation for attitude change based on the concept that dissonance is an unpleasant state which occurs whenever an individual holds two cognitions (ideas, beliefs, attitudes) which are psychologically inconsistent.

Making decisions

We make decisions (a cognitive process) about health-related behaviour for a variety of reasons, explored below.

Relief from stress, anxiety and boredom

We often decide to behave in ways that are risky to our health to relieve feelings of stress, anxiety and/or boredom.

For example, emotional overeating (or 'comfort eating') is a common response to stress/anxiety/boredom. The same is true of smoking. Many smokers find smoking relaxing and anxiety-reducing, partly due to the biochemical effects of nicotine. Therefore, smoking is a kind of *self-medication*, that is using a drug to make yourself feel better. It also becomes habitual, 'something to do' to alleviate negative feelings.

If a person decides to use these short-term coping strategies this can reduce symptoms of stress, anxiety and/or boredom. But they create health issues in the longer term, e.g. obesity, heart problems, cancer.

Mitigating other health problems

Some health-related decisions can be health-protective. We engage in certain behaviours to reduce (mitigate) the impact of other health issues. There are three good examples of such behaviours:

- Being physically active (e.g. exercising, walking, playing sport).
- Eating a diet with a lot of fruit and vegetables.
- Taking prescribed medication.

All of these are associated with health and recovery from illness.

Resolving cognitive dissonance

The term 'dissonance' refers to a lack of agreement. When you disagree with someone you experience dissonance – a feeling of discomfort. Agreeing with someone creates a feeling of harmony.

Cognitive dissonance refers to a disagreement with yourself! It is experienced when making decisions, such as choosing between two equally attractive options. Whichever you choose you are going to think 'maybe I should have selected the other one'.

Dissonance is also experienced when engaging in an unhealthy behaviour such as smoking. The dissonance arises because you want to smoke (because it is enjoyable) but you also want to give up (because you believe it is bad for your health).

There are two main ways of resolving cognitive dissonance – change the behaviour or change the belief. A smoker can resolve their dissonance by:

- Finding ways to stop smoking, or
- Changing their belief that smoking is harmful (e.g. by dismissing the scientific evidence).

Both have the same outcome in terms of dissonance, but clearly the first option is beneficial to health and the second is not.

Professional biases

Healthcare professionals (e.g. psychologists, doctors, nurses, therapists, etc.) make decisions about diagnosis and treatment of physical and psychological ill-health. These decisions are affected by various individual *biases*, i.e. an inclination to believe one thing rather than another. Such biases are usually not deliberate but are unconscious because the professional is not aware the biases are affecting their decision-making.

Two common examples are racial bias and gender bias. These disadvantage people from ethnic minorities and women. According to Elizabeth Chapman *et al.* (2013) the result of such biases is that a diagnosis is likely to be less accurate, fewer treatment options are discussed, and time spent talking to the client is shorter.

Professionals may also show other biases based on age, weight, social class, disability, sexuality, etc.

These biases are cognitive because they are based on *stereotypes* – they occur when professionals perceive clients not as individuals but as members of a group.

Evaluation

Practical application of understanding decisions

One strength is that the cognitive approach can lead to positive health-related decisions.

If we think about our health-related decisions, we may be able to change our behaviour. For instance, instead of responding to stress by 'comfort eating' you can identify that is what you are doing, and make a decision to do something different such as seeking social support for your stress (speak to a friend). This would be a healthier decision.

This shows that knowing about how we usually respond to stress, anxiety and boredom can help us to behave more healthily.

Practical application of cognitive dissonance

Another strength is that cognitive dissonance can be used deliberately to change behaviour.

For example, Vani Simmons and Thomas Brandon (2007) used dissonance to change smoking-related behaviours. Smokers discussed smoking-related topics and then prepared and filmed an anti-smoking speech (intervention group). Compared with a control group, the intervention group participants were more likely to change their behaviour (e.g. they picked up anti-smoking pamphlets). After one month they also had stronger intentions to stop smoking.

This shows that cognitive dissonance can be used in effective interventions that change unhealthy behaviours.

Practical application of biases

A further strength is that bias can be reduced.

One way to do this is to encourage health professionals to see clients as individuals and not as members of a group. Louis Penner *et al.* (2013) did this by asking white doctors and black clients to read and sign a 'team contract' before they met. This reminded them they were acting as part of the same team working together. After 16 weeks the black clients expressed more trust in their doctors and continued with treatment longer than clients in a non-intervention control group.

This shows that professional biases can be identified and removed so that all clients can get suitable treatment.

Behaviours such as comfort eating, smoking and oversleeping are the result of decisions we make to cope with stress, anxiety and boredom.

Exam-style questions

Sigourney smokes about 40 cigarettes a day. Most of her friends don't smoke and when they ask Sigourney why she does, she says, 'Because it helps me escape from all the problems in my life. Although these days I think it's mainly when I've got nothing better to do.'

1. Use the cognitive approach to explain **one** reason why Sigourney smokes. (2 marks)
2. Identify **one** other reason why people behave in unhealthy ways according to the cognitive approach. (1 mark)
3. Sigourney knows that smoking is bad for her health and that she really should try to stop. She feels very worried whenever she thinks about this.

   Explain what psychologists mean by 'cognitive dissonance'. (2 marks)
4. Explain **two** ways in which Sigourney could resolve her cognitive dissonance. (4 marks)
5. Identify which of these is more likely to result in behaviour change **and** explain why. (3 marks)
6. Sigourney went to see her doctor because she had a severe pain in her chest. She was unhappy because the doctor spoke for most of the appointment, didn't send her for any tests and only discussed one option for treatment.

   Use the cognitive approach to explain why the doctor may have been showing bias. (2 marks)
7. Assess the usefulness of identifying bias in the doctor's approach. (3 marks)
8. Evaluate the cognitive approach to explaining Signourney's behaviour. (9 marks)

GET ACTIVE Dissonance thermometer

Gus loves eating meat but has friends who spend a lot of time telling him the benefits of going meat-free. So Gus worries that, if he continues to eat meat, it could be harming his health and the environment.

To reduce his dissonance, Gus could (in no particular order):

- **Reduce his meat consumption.**
- **Tell people fish 'isn't really meat'.**
- **Convince himself that eating wafer-thin ham is OK.**
- **Cut meat out of his diet altogether.**
- **Stop listening to his friends.**
- **Tell himself that climate change doesn't exist anyway.**

1. *Draw a thermometer scale and place the above strategies from cold (easy) to hot (hard).*
2. *Choose a different health-related behaviour and list as many specific ways as you can that someone could resolve their cognitive dissonance. Place these on another thermometer scale.*
3. *Are there any patterns to the things that are easy or hard?*

An issue to consider

The three topics on this spread have one thing in common – they are 'cognitive'.

Explain what this means bearing in mind that cognitive is to do with 'thinking'.

Specification content

A2 Psychological approaches to health

Learners will explore psychological approaches to health and suggest how these could be applied to different scenarios.

Cognitive approach:

- Decisions to engage in behaviours to provide relief from stress, anxiety, boredom or to mitigate impacts of other health problems.
- Resolving cognitive dissonance for behaviour change.
- Professional biases in diagnoses and treatments.

Transtheoretical model

The transtheoretical model accepts relapse as a part of the process of recovering from addiction and explains how it can be dealt with.

Social media detox

You've probably heard that social media can be a bit like an addictive drug. One similarity is how hard it can be to stop doing it.

More and more people are taking a temporary or permanent digital/social media detox.

Ed Sheeran left Twitter in 2017 and has had occasional extended breaks from all social media since 2015.

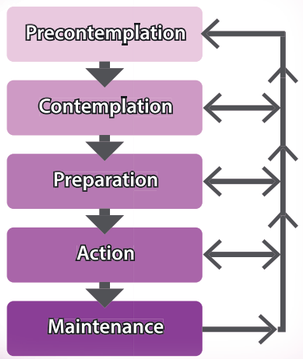
Spending a lot of time on social media is stressful and sometimes you just have to protect your mental health. 'I would wake up in the morning and look at it first thing, I would go to bed and it was the last thing I looked at,' Kendall Jenner said of Instagram.

What's your experience of social media? If you fancy a day off, look out for the *UK's National Day of Unplugging*.

Specification term

Transtheoretical model This explains the stages people go through to change their behaviour. It identifies five main stages, from not considering change at all (precontemplation) to making permanent changes (maintenance). An addicted person does not necessarily follow the stages in a linear order.

The transtheoretical model



Key concepts of the transtheoretical model

James Prochaska and Carlo DiClemente (1983) devised the model to explain behavioural change to overcome addiction.

The model makes four important assumptions about change:

- People change their addictive behaviour through a series of progressive stages.
- However, the model recognises that change does not happen quickly or in a tidy linear order from start to finish. Change is not a single event but a cyclical process. Clients progress through stages but they also return to earlier ones and some stages may be missed out completely.
- People differ in how ready they are to change addictive behaviour – some are thinking about it, some are doing something about it and others have decided to do nothing.
- How useful an intervention is depends on the stage the client is currently in – some interventions will be effective at an early stage of the change process but less useful later on.

There are five stages in the model.

1. Precontemplation ('*Ignorance is bliss*')

People in this stage are not thinking about changing their behaviour in the near future (usually defined as the next six months). There are two main reasons for this – denial (they don't believe they need to change) or demotivation (they've tried before and failed).

Intervention at this stage should focus on helping a client to consider the need for change.

2. Contemplation ('*Sitting on the fence*')

Someone at this stage is considering changing their behaviour in the next six months. This does not mean they have decided to change. They are just more aware of the need to change (e.g. they risk getting cancer), but they are also aware of the costs (e.g. less enjoyment). This conflict between behaviour and belief may create psychological discomfort (cognitive dissonance, see page 20).

People can remain in a chronic state of contemplation for a long time, so a useful intervention is to encourage cognitive dissonance by emphasising the benefits of change.

3. Preparation ('*OK, I'm ready for this now*')

The client believes that the benefits of change outweigh the costs, so they decide to change their behaviour sometime within the next month. But they haven't decided exactly how and when to change.

Therefore, the most useful intervention is support in constructing a plan or presenting some options (e.g. joining a weight-loss club, calling a helpline, making a GP appointment).

4. Action ('*Let's do this*')

People at this stage have done something to change their behaviour in the last six months. This might be something formal and structured, such as a form of therapy. Or it could be something less formal but still meaningful, such as cutting up cigarettes or pouring alcohol down the sink. The action the person takes must substantially reduce their risk (e.g. giving up cigarettes altogether rather than just switching to low-tar versions).

Intervention at this stage focuses on developing the coping skills the client will need to maintain their behaviour change into the future.

5. Maintenance ('*Stay on track*')

The person has maintained a change for more than six months. They become more confident that the change can be continued in the longer-term because it becomes a way of life.

Intervention focuses on relapse prevention by applying learned coping skills (e.g. avoiding situations where cues might trigger old behaviours, using available sources of support).

Evaluation

Dynamic process

One strength is that the transtheoretical model views behaviour change as a dynamic process.

Changing addictive behaviour is not an 'all-or-nothing' event. Instead, the model emphasises the importance of time. For example, giving up smoking is a continuing process and the duration of stages varies for each person. People move through the stages in the same order but not at the same rate and there is recycling backwards to differing degrees.

Therefore, the transtheoretical model is useful because it matches the experience of many people who try to change their behaviour.

Practical application

Another strength is that the model is useful in real-world practice because it has a positive view of relapse.

The model sees relapse as the rule rather than the exception. Relapse is not a failure but an inevitable part of the untidy process of change. The model focuses on relapse and suggests interventions to help. Changing behaviour takes multiple attempts and this is built into the model.

This means that the model is more acceptable to clients because they can see it is realistic about relapse.

Arbitrary stages

One weakness is that there is little research support for the stages of the model.

In practice, it is hard to distinguish one stage from another because the 'cut-off points' are arbitrary. For example, someone who plans to stop smoking in 30 days' time is in the preparation stage, but if they plan to give up in 31 days' time, they are in the contemplation stage. This matters because, according to the model, the recommended interventions at these stages are different.

This suggests that the transtheoretical model has little usefulness for understanding changes over time and for treatment recommendations.

GET ACTIVE Applying the model

Nathan Smith of the University of Manchester has created a video in which he explains the transtheoretical model and applies it to physical exercise. You can watch the six-minute video here: tinyurl.com/48xha9bd

He describes the process of behavioural change as a journey.

1. *Explain in what ways behavioural change is like a journey.*
2. *Make some notes from the video for each stage of the model.*
3. *Choose a form of addiction – it can be physiological (e.g. addiction to a drug) or behavioural (e.g. addiction to gambling, shopping, etc.). Write your own brief description of the transtheoretical model, applying each stage to your selected addiction.*

Exam-style questions

The transtheoretical model is one way that psychologists have tried to explain behaviour change. It views change as going through a series of stages.

1. In relation to the transtheoretical model, explain what is meant by the term 'maintenance'. (2 marks)
2. Name **and** briefly outline **one other** stage of the transtheoretical model. (3 marks)
3. Briefly outline the transtheoretical model as a theory of addiction. (4 marks)
4. Saj is a smoker who, after many years, has finally accepted that he needs to stop. So he has decided to call a stop-smoking phone helpline.

   Lattie has gambled away a lot of money online over the years. However, she has been to meetings of Gamblers Anonymous every week for the past two months.

   Which stages of the transtheoretical model are Saj and Lattie currently at? (2 marks)
5. Explain Saj's behaviour in terms of the transtheoretical model. (3 marks)
6. Explain Lattie's behaviour in terms of the transtheoretical model. (3 marks)
7. Assess the transtheoretical model as an explanation of Saj's **and/or** Lattie's behaviour. (9 marks)

An issue to consider

The transtheoretical model has been criticised for not really being a model of behaviour change. Why do you think this is? Here's a clue. Read back through the descriptions of the stages. How many of the stages involve any actual changes in behaviour at all?

Do you think it is a model of behaviour change?

Specification content

A3 Theories of stress, behavioural addiction and physiological addiction

Learners will explore theories of stress, behavioural addiction and physiological addiction, and apply these theories to different scenarios:

- Transtheoretical model: precontemplation, contemplation, preparation, action, maintenance.

Mindfulness

The world in a raisin

WAKE UP!

You're on automatic pilot most of the time. There are so many things you do during the day that you don't even think about. Perhaps you can become more mindful, or aware of what you're thinking, feeling and doing. You can practise mindful eating.

Take a raisin (chocolate-covered or not – your choice).

Hold it in the palm of your hand and look at it, really look at it as if for the first time. You've never seen anything like it before. Describe how it looks.

What about the texture? Squeeze the raisin. What does it feel like in your fingers?

Smell it – does it remind you of anything?

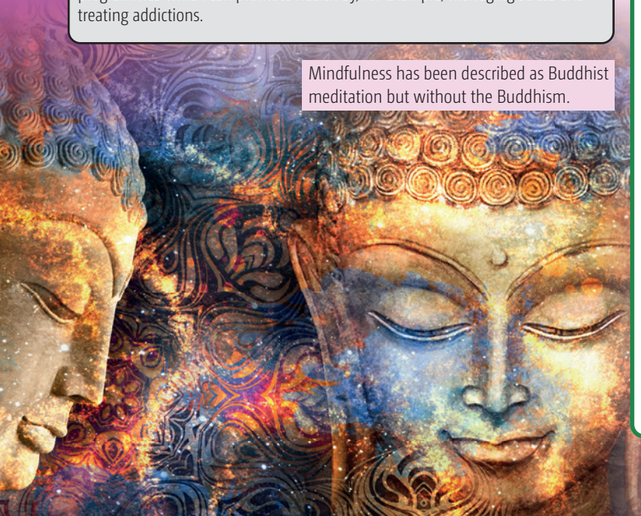
Put it in your mouth but don't eat it. How does it taste? What's the texture like now? Move it around your mouth, take your time. Then chew it slowly.

What about sound – can you hear anything?

While you were doing this, did you think about the past or worry about the future?

Specification term

Mindfulness An approach to life which emphasises 'being in the present', and attending to/regulating thoughts, feelings and emotions in an accepting and non-judgemental way. It involves meditative techniques structured into programmes which can promote health by, for example, managing stress and treating addictions.



Mindfulness has been described as Buddhist meditation but without the Buddhism.

What is mindfulness?

Mindfulness is a psychological approach to living that involves us 'being in the present moment' rather than worrying about the future or fretting about the past.

Mindfulness promotes both mental and physical health because it is used to treat/manage stress and addiction in a positive way.

The main features of mindfulness are:

- Attending to and regulating thoughts, feelings and emotions – you monitor your present thoughts and feelings so you can step back from them, observe and accept them. Therefore, negative thoughts and feelings do not take over and control you.
- Being in the present – moment-to-moment awareness of bodily sensations, sights, smells, sounds, etc. (e.g. the sensation of breathing).
- Promoting healthy behaviours – mindfulness can be developed through training and by practising certain techniques. Clients can reduce their stress by applying the techniques to everyday life. They can make positive changes to their lives and behaviour because they experience the present more clearly.

Mindfulness and stress

Jon Kabat-Zinn (2003) devised *mindfulness-based stress reduction* (MBSR), a structured programme of standardised techniques based on Buddhist meditation.

Some of the elements are:

- One 2.5-hour group session per week for eight weeks, plus a retreat for one day (going somewhere quiet in the countryside) and daily 'homework'.
- Mindful focus – turn your attention inwards and observe your own thoughts without judging or evaluating them (becoming more aware of your breathing can help).
- Body scan – lie on your back and become aware of different parts of your body, from your feet upwards. Focus awareness on any tense or painful areas until they relax.
- Mindful stretching – slowly change the position of your body and focus on the physical sensations as you do it (you can take this technique further with yoga).

MBSR reduces stress because you are less troubled by stressful thoughts as they pass through your mind. It also promotes distraction by focusing attention away from the sources of stress.

Mindfulness and addiction

Eric Garland (2013) developed a programme for addiction recovery called *mindfulness-oriented recovery enhancement* (MORE).

- As addictive behaviour is often automatic, MORE helps an addicted person become aware of their behaviour (*mindful* rather than *mindless*).
- One technique is the chocolate exercise. A client holds a piece of chocolate under their nose and experiences their automatic cravings, linking this with cravings for their addictive drug/behaviour. The client switches their attention from their cravings to their breathing and eventually the cravings subside, reducing the power of addictive cues.
- The mindfulness techniques in MORE are guided – a voice (recorded or live) gives a client direction to their meditation.

Evaluation

Research support

One strength is research evidence supporting the effectiveness of mindfulness-based programmes.

Wen Li *et al.* (2017) reviewed 34 studies testing the effectiveness of several programmes for addiction, including MORE. They found that MORE had better outcomes than other programmes (e.g. in reducing cravings and substance use). A similar review of 20 studies found that MBSR reduced stress more than alternative treatments or no treatment (Grossman *et al.* 2004).

This shows that the central concepts of mindfulness can help to manage stress and treat addictions.

Wide practical applications

Another strength is that mindfulness has been successfully applied very widely.

It has been used to help lower the stress levels of people receiving treatment for cancer. It has also been used in education (to improve academic achievement), in workplaces (to increase job performance) and in sport (to increase task focus) (Shonin *et al.* 2015). The applications are wide because mindfulness is flexible. Although there is a central standard core of practice, it can be tailored to individuals' needs to a certain extent.

Therefore, mindfulness-based programmes can be used to help people in a variety of situations.

Exaggerated effectiveness

One weakness is that mindfulness may have been 'overhyped'.

Mindfulness has caught the public imagination but, despite the points above, evidence is often inconclusive. Studies supporting mindfulness-based treatments have many weaknesses. For example, they often have no control groups or the outcomes are short-term (Farias and Wikholm 2016). So, the exaggerated claims for mindfulness as a treatment for stress and addiction are not based on scientific evidence.

Therefore, mindfulness-based treatments may be no more effective than approaches using physical exercise or relaxation.

You can obviously practise mindfulness techniques on your own, but structured programmes such as MBSR and MORE tend to involve group activities.

Exam-style questions

Frances is a junior chef in a very busy restaurant kitchen. She has to work long hours in a high-pressure environment. Her colleagues are often aggressive and do not usually support each other. Frances believes her health is suffering and she would like to change jobs but feels trapped.

1. Explain how mindfulness could help Frances manage stress. (3 marks)
2. Assess the use of mindfulness to help Frances. (3 marks)
3. Frances is addicted to online gambling which has cost her a lot of money and destroyed several relationships. She plays fruit machines, just pressing keys and tapping screens, as if she's on automatic pilot. Frances has been seeing a clinical psychologist who wonders if mindfulness might help.

   Explain how mindfulness could help Frances tackle her addictive behaviour. (3 marks)
4. Assess the use of mindfulness to help Frances. (3 marks)
5. Explain what is meant by the term 'mindfulness'. (2 marks)
6. Discuss the effectiveness of mindfulness in treating and managing Frances's stress **and/or** behavioural addiction. (9 marks)

GET ACTIVE Being mindful

Try one or two mindfulness-based techniques yourself.

Put aside five minutes to sit quietly. Watch your thoughts drifting through your mind. Don't allow yourself to 'think' about them – imagine they are clouds floating through the sky, just observe them and let them go past.

Breathe in through your nose and out through your mouth. Feel it settle into a rhythm and just follow it.

Mindfulness can be assessed with the Five Facet Mindfulness Questionnaire (FFMQ). As the name suggests, there are five main aspects to mindfulness, so in completing the FFMQ you get a more detailed idea of what mindfulness is. You can find it here: tinyurl.com/rw4dtd4z

1. *Is it easy to just watch your thoughts drift? Do you think you could manage it with practice?*
2. *Did you feel less stressed afterwards? If so, what do you think was the main reason?*

An issue to consider

A neglected issue relevant to mindfulness is ethics. Do you think there are any ethical issues with using mindfulness to manage stress and treat addiction?

Consider both the individual and social levels.

Specification content

C2 Treatment and management of addiction and stress

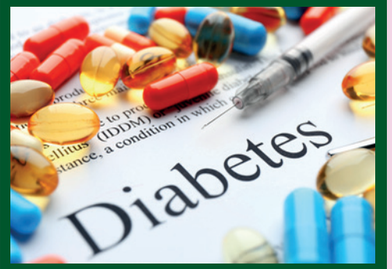
Learners demonstrate knowledge and understanding of key physiological and psychological methods of and professional approaches to, managing stress and addiction, exploring their effectiveness, including ethical and practical factors. Learners select and apply appropriate methods to scenarios, justifying decisions.

Physiological and psychological treatment of stress management and addiction:

- Mindfulness – attending to and regulating thoughts, feelings and emotions; being in the present; promoting healthy behaviours.

Content area C3: Maintenance of behavioural change

Reasons for non-adherence 1 and 2



Farouq's story

Clients who are supplied with prescribed medicines but don't take them are thought to cost the NHS more than half a billion pounds every year. But when you read that statistic, perhaps your first thought wasn't, 'That's a lot of money', but rather, 'Why would anyone *not* take their medication?'.

Failing to follow medical advice, including not taking medication, is called *non-adherence*. Here is a real-life case study:

Farouq is 63 and has had Type 2 diabetes for ten years. He gets free healthcare including prescriptions and a monthly visit to a clinic.

People with diabetes need to watch what they eat because it affects their blood glucose (sugar) level and their body can no longer control such increases. Lack of control may lead to more serious illness.

But Farouq ignores dietary advice and eats what he likes. Farouq often doesn't take his medication because the different packages confuse him. His general attitude is, 'When your time is up, there's nothing you can do about it'.

As a result, he often has hypoglycaemic attacks (due to low sugar levels) and his overall health is poor. He developed severe ulcers on both feet. And these got worse because Farouq would not go to the specialist centre to get them properly treated.

(Based on an article by Agabna 2014)

Specification terms

Cost-benefit analysis An individual weighs up the balance between the perceived benefits of changing behaviour and the perceived barriers (obstacles to change).

Non-adherence Refers to an individual's decision not to follow ('adhere to') medical advice.

Rational non-adherence Making a conscious decision after careful consideration not to follow medical advice. Making a deliberate choice is sometimes referred to as 'non-compliance'.

Stress

NOTE
On this and the next spread we look at four reasons for non-adherence.

Stress can affect *non-adherence* in at least four ways:

- Stress can arise from poverty (e.g. not having enough money). Non-adherence is worse in lower socioeconomic groups (e.g. for diabetes medication, Mayberry *et al*. 2015).
- Stress is closely associated with chaotic lifestyles. Being disorganised can be stressful and stress can make people disorganised. In these circumstances people often forget to take medication or find it hard to follow medical advice (e.g. they cannot schedule exercise or relaxation).
- Stressed clients are usually anxious, so their attention becomes narrower. When speaking to professionals, they latch onto key words and ignore the rest. For example, once a client hears the word 'cancer', they may not pay attention to the more positive information that follows which would reduce their anxiety ('But it's at a very early stage and we can do something about it'). Other ignored information might concern follow-up appointments and medication, making adherence unlikely.
- Stress can also interfere with memory. Even if clients understand medical advice, adherence is impossible if they cannot remember it. Between 40% and 80% of medical advice is immediately forgotten (and only about half of what is remembered is correct, Kessels 2003).

Rational non-adherence

Sometimes clients decide not to follow medical advice for logical and rational reasons (i.e. they choose *rational non-adherence*).

Cost-benefit analysis

Clients may make a deliberate decision to follow or not follow medical advice after weighing up costs and benefits (*cost-benefit analysis*).

The main benefit of taking prescribed medication (or making lifestyle changes, etc.) is that it will reduce or eliminate the symptoms of an illness, disease or injury.

Psychologists have identified three main costs:

Side effects The main cost is probably the unacceptable side effects of some medications, which include dizziness, stomach problems, sexual difficulties and memory problems (Bulpitt and Fletcher 1988).

Financial barriers Some people do not adhere to medical advice simply because they cannot afford to. This is less of an issue in countries with a healthcare system 'free at the point of use' (such as the NHS). People with private medical insurance that covers treatment are more likely to adhere to medication because cost doesn't matter to them (Laba *et al*. 2012).

Patient–practitioner relationship The level of trust the client (patient) has in their medical practitioner affects non-adherence. A major influence on trust is the practitioner's relationship style. In a 'practitioner-centred approach' the practitioner has all the power in the relationship and views treatment as non-negotiable. This style is more likely to lead to non-adherence than a friendly and personal client-centred approach.

GET ACTIVE Clients won't take their meds

One important risk factor for cardiovascular disorder (CVDs, such as heart disease and stroke) is level of blood cholesterol. Statins are drugs that reduce cholesterol. They are very effective and therefore significantly improve the outlook for clients at risk of CVDs. However, up to 80% of high-risk clients do not take the statins that have been prescribed.

A group of exasperated GPs think this is just because patients can't be bothered. However, a health psychologist argues there may be good reasons why people don't take their drugs.

Imagine you are a health psychologist. Write a short report for doctors explaining the reasons why people don't take prescribed drugs, and suggesting possible solutions. For added impact, refer to ***at least one research study.***

Evaluation

Research support

One strength is research evidence to support the role of stress in non-adherence.

For example, Hamidreza Roohafza *et al*. (2016) studied almost 10,000 clients with diabetes and/or hypertension (high blood pressure). They found that the clients experiencing the highest levels of stress were non-adherent to medication and/or exercise advice.

This supports the view that stress can substantially increase the risk of non-adherence even in life-threatening disorders.

Short-term versus long-term effects

One weakness is the long-term effects of stress on non-adherence are unclear.

For example, studies tend to look at the short-term effects, so it is unclear how non-adherence changes over time with stress levels. We would expect adherence to increase as stress reduces (which would point to a practical application). But we do not know this for sure.

This means the role of stress is unclear and it is hard to develop practical interventions to increase adherence.

Evaluation

Research support

One strength is that research confirms the influence of rational factors.

For example, Beatriz González López-Valcárcel *et al*. (2017) studied what happened in Spain when older clients had to start paying a share of their medication costs in 2012. Adherence declined significantly for expensive drugs, but not for cheaper ones.

This shows that non-adherence is increased by financial barriers, suggesting it has a rational basis.

Unjustified assumption

One weakness is that the approach is based on an inaccurate view of clients.

Rational non-adherence assumes that a client has weighed up the costs and benefits of following medical advice in a cool and calm way before making a decision in their best interests. However, health decisions are often not made like this. Many decisions are made without a plan, and the client's current stressful situation is often more important than a cost-benefit analysis.

This suggests that non-adherence as a rational process cannot explain all health-related decision-making.

To take or not to take, that is the question. How can that decision be rational?

A diagnosis of serious illness may create stress which then makes rational thinking difficult.

Exam-style questions

Karine has severe back pain after a fall. Her doctor has given her a treatment plan. She has to take four different drugs each day, do exercises at home and go for an MRI scan. Karine has very little money, the nearest pharmacy is miles away and she has no car. She also finds it hard to be organised at home. Karine may not follow the treatment plan. One explanation for this is the stress she is experiencing.

1. Explain how Karine's stress means she might not follow the treatment plan. (2 marks)
2. Assess this explanation for why Karine might not follow the treatment plan. (3 marks)
3. The doctor Karine saw isn't her usual one and she didn't like the way he spoke to her. He also seems quite inexperienced and used a lot of words that she didn't understand. The last time Karine took medication for something she was ill afterwards.

   Explain how a cost-benefit analysis might influence Karine's decision whether to follow the treatment plan. (3 marks)
4. Explain what is meant by the term 'rational non-adherence'. (1 mark)
5. Assess the view that rational non-adherence is why Karine might not follow the treatment plan. (3 marks)
6. Discuss **two** reasons why Karine might not follow the treatment plan. (9 marks)

An issue to consider

We've said that when people make health-related decisions, they are not always being rational. What factors (rational or irrational) might influence decisions about our health and how rational (or irrational) are they?

Specification content

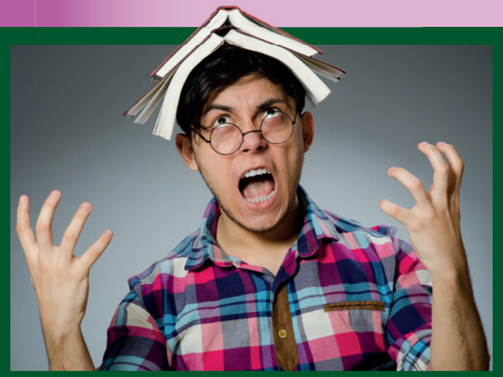
C3 Maintenance of behavioural change

Learners demonstrate knowledge and understanding of key concepts of theories and methods of behavioural change in relation to non-adherence and improved adherence to medical advice and explore their effectiveness. Learners apply these key concepts of theories and methods of behavioural change to scenarios.

Reasons for non-adherence:

- Stress – the perceived inability to cope as a threat to behaviour change.
- Rational non-adherence, including cost-benefit analysis, financial barriers, patient-practitioner relationship.

Reasons for non-adherence 3 and 4



No escape?

If you were in a stressful situation and there was a way out, you'd take it wouldn't you?

Here's the story of a student who could never get a good grade for his homework. Let's call him Josh.

Josh tried everything. He wrote long essays and short ones, essays with an introduction and a conclusion, with headings and without. He used different-coloured pens! But none of it made any difference. The next piece of work would always come back with a poor grade.

Eventually, he got disheartened and demotivated and just gave up, like we probably all would.

So far, so predictable.

Then one day, a kind teacher offered to give Josh a revision guide (good idea!), jam-packed with advice about answering questions.

Just the thing he needed, you would think. Surely worth a try at the very least?

But Josh was too far gone – he turned down the offer thinking, 'There's no point, I'm obviously rubbish at this and I'll never get any better'.

It's easier not to try when you've learned to be helpless.

Specification terms

Learned helplessness If a person finds that they cannot escape an aversive situation, they eventually stop trying to escape, i.e. they learn to be helpless.

Support People cope with stressful situations by seeking help from their friends, family and acquaintances.

Health professionals expect to provide some emotional support, but clients sometimes expect more.

Learned helplessness

Part of being ill means repeatedly facing stressful situations that you feel you cannot control. Therefore, there is a serious risk that people who are ill learn to be helpless in these circumstances. The outcome is that even when there are opportunities to be in control, they are not taken.

Link with health

Taking medication or following lifestyle advice are things a client has control over (they can choose to do them). But in many cases, a client learns that taking control makes no difference to their health. So they no longer try to behave in ways that could change their situation. They don't take their medication, do any exercise, keep appointments, etc.

However, whether we learn to be helpless or not depends on how we *think* about health and illness (Abramson *et al*. 1978). A person will lose motivation and become passive if they think about their behaviour in the following ways:

- 'It's all my fault because I just can't do these exercises.'
- 'There is nothing I can do to get better.'
- 'I'll never be able to do my exercises.'

These are all negative ways to think, signs of *learned helplessness* which then perpetuate this way of thinking.

Downward spiral

Someone experiencing learned helplessness may well become depressed, so the depression itself makes non-adherence more likely. Non-adherence makes the depression worse and reinforces learned helplessness, which makes non-adherence more likely... So the client is trapped in a downward spiral.

Lack of support

We are less likely to adhere to medical advice when we do not have help (*support*) from other people.

Significant others

Lack of practical support Without a social network (e.g. partners, family, friends), a person may have no one to remind them to take medication, take them to appointments, show them how to access exercise videos, etc.

Lack of emotional support Adherence is less likely when the client lacks people who can help improve their mood, or who can provide encouragement, rewards, a 'shoulder to cry on'.

However, relationships with significant others can be negative. A lack of such support may actually produce *better* outcomes for someone who needs to follow medical advice because they rely more on support from professionals.

Health professionals

Lack of practical support The main type of support usually provided by health professionals is informational. Health professionals are experts on the benefits of adherence, so a lack of information from them can lead to non-adherence.

Lack of emotional support Clients usually expect professionals to provide some emotional support as well. Most professionals consider this part of their role. But there may be a 'gap' between the amount of support clients expect and professionals provide.

The key factor is how a client *perceives* the support. Where a client feels that they do not trust the professional, or that communication is poor, they will perceive a lack of emotional support. A classic example is where a client feels the professional does not understand them 'as a person' but only as a collection of symptoms.

Evaluation

Practical application

One strength is that interventions can target learned helplessness.

For example, cognitive therapy can help clients to change how they perceive the link between behaviours (taking medication, etc.) and outcomes (getting better). Clients can break out of the downward spiral when they see that what they do makes a positive difference to their health.

This means there are practical steps that clients can take to increase adherence by overcoming learned helplessness.

Poor research support

One weakness is that there is surprisingly little research support for the role of learned helplessness.

Michael Kuttner *et al*. (1990) studied a group of diabetic children. They found that learned helplessness was associated with worse metabolic control but not with medication adherence. Learned helplessness is also associated with depression, stress and low self-esteem. It may be these factors that cause non-adherence, so learned helplessness is only an indirect influence.

Therefore, learned helplessness may have negative impacts on health, but not necessarily by affecting non-adherence to medical advice.

Evaluation

Research evidence

One strength is a range of evidence showing that lack of support is linked to non-adherence.

Adherence is lower in people who are living alone, especially if they are older and have cognitive impairments. Homeless people, people who generally live in unstable circumstances and people with mental health issues are at risk of non-adherence (Wheeler *et al*. 2014).

Therefore, low adherence can be explained by a lack of support from significant others and in some cases from healthcare professionals.

Single factors only

One weakness is that support from professionals is just one factor influencing non-adherence.

Despite so many attempts to understand and improve adherence, non-adherence is still widespread and extremely costly in terms of illness and finances. This is partly because interventions usually only address one factor at a time, e.g. support from professionals (of course this is a criticism that could apply to any single factor linked to non-adherence).

This suggests that support from health professionals is not enough on its own to improve adherence significantly.

GET ACTIVE Learned helplessness and you

Psychologists use questionnaires to measure learned helplessness, including one developed specifically for young adults. This is the Attributional Style Questionnaire for Adolescents and you can find it here: tinyurl.com/eert4rf9 (click on 'Download full-text PDF' then go to page 849 of the article).

This isn't a 'quick and easy' questionnaire to complete and the presentation of it is a bit confusing. But it's worth looking through the 18 scenarios and the questions themselves to get a better idea of what learned helplessness involves.

1. *Write **two** or **three** scenarios that apply to health/illness.*
2. *Explain how a high score on this questionnaire would relate to the issue of non-adherence.*
3. *Give **two** weaknesses of the questionnaire.*

One of the most dangerous aspects of learned helplessness is that you can get trapped in a downward spiral and fail to do anything to get out of it.

Exam-style questions

Lucia is taking part in a heart attack recovery programme. As part of the programme she has to give up smoking and make some other lifestyle changes. She is finding it very hard and has stopped trying. She just feels she hasn't got what it takes to give up smoking and she'll never be able to do it, so now she thinks it's pointless.

1. Outline how learned helplessness might explain Lucia's behaviour. (2 marks)
2. Assess learned helplessness as an explanation of Lucia's behaviour. (3 marks)
3. Lucia lives on her own, has very few friends and her children live a long way away. She doesn't know how to text, use Facebook or 'technical stuff like that'. She has no transport and the pharmacy and GP are miles away. A young man from social services comes to Lucia's home once a week to clean and see how she is. But Lucia doesn't trust him and they hardly speak.

   Name **one** type of support Lucia may lack. (1 mark)
4. Explain how a lack of support could affect Lucia's adherence behaviour. (2 marks)
5. Assess the usefulness of viewing Lucia's non-adherence in terms of a lack of support. (3 marks)
6. Analyse **two** reasons why Lucia might not follow the heart attack recovery programme. (9 marks)

An issue to consider

Most of the reasons for non-adherence have research evidence to support them. They also have practical applications. Which do you think is more important – research support or practical applications? And why?

Specification content

C3 Maintenance of behavioural change

Learners demonstrate knowledge and understanding of key concepts of theories and methods of behavioural change in relation to non-adherence and improved adherence to medical advice and explore their effectiveness. Learners apply these key concepts of theories and methods of behavioural change to scenarios.

Reasons for non-adherence:

- Learned helplessness – control over behaviour and outcomes.
- Lack of support – significant others, health professionals.

Methods used to improve adherence 1 and 2

Take a good look at this face

How would you describe this expression? Friendly? Curious? Happy? Smug? Or perhaps threatening?

Do you think other people would perceive this face the way you do? Ask them – show the face to a few people and find out what they think. There's a good chance that they will see something different from you.

That's the interesting thing about psychology.

In many ways, what this expression 'really' is doesn't matter much. What matters is how you *perceive* it – and that might not match up with the reality at all.

As we see on this spread, the same is true of health and illness. Why do some people not follow medical advice when their lives may depend on it?

Perhaps they perceive a threat where others don't or where there is no threat.

Specification term

Health education 'Aims to influence a person's knowledge, attitudes and behaviours connected to health in a positive way. It is a process during which people learn how to take care of their own and other people's health.' (European Centre for Disease Prevention and Control, tinyurl.com/ps6ddysb)

Health education and promotion

Relevance to target group

People who need to follow medical advice differ from each other in several ways and attempts to improve adherence must take these differences into account. For instance, elderly clients may have issues with memory, so *health education* should include opportunities to confirm that the client has understood and remembered the advice.

Another important difference is level of literacy skills. Health education should use simple language in discussions and limit the number of key points to two or three and be followed up with written materials, also in everyday language.

In making lifestyle changes, some clients (e.g. people with learning difficulties) benefit from a health professional modelling the behaviour, e.g. showing them specific exercises or how to plan meals. This is because there is more to health education than just passing on knowledge, especially when the medical advice is complex.

Improving access to information

Access to information is improved when it is given in a form that suits the client (e.g. a printed booklet). Using the internet is an obvious way to improve access. Websites (e.g. the NHS website) and apps (e.g. Patient Access) are accessible to many clients (although not all of them, so alternatives are necessary).

Discussions with health professionals are still a key source of information and appointments can be made via apps. Pharmacists have become more accessible sources because they are present on many high streets and appointments are not usually necessary. Telephone follow-ups to discussions are common and give clients the chance to ask questions that they may not have considered during a face-to-face consultation.

Reduction of perceived threats

An example of a perceived threat is a client believing they risk harm if they adhere to medical advice (e.g. severe side effects from taking a drug). What matters is that the client *perceives* harm is likely, even when the true risk is tiny. Therefore, changing the client's perception of threats is a useful target for improving adherence, e.g. helping them think realistically about risk (from side effects and from the illness itself).

Resistance

Clients resist following medical advice if they perceive it as threatening. Reducing the client's resistance can change their perception of the threat. For example, an intervention could encourage clients to build physical activity into their daily routine so it becomes a habit. They may eventually reassess their perception of threat, which is more productive than trying to change their beliefs.

Understanding of needs

We all have needs, such as the need to be accepted and to avoid rejection. Clients perceive something as threatening if it prevents their needs being met. For example, someone who is part of an anti-vaccination social media group may be vulnerable to a disease that could kill them. But it is even more important to them that they are accepted by a group that shares their values. So, a useful intervention could be to give the client another source of acceptance, one that allows them to follow medical advice without experiencing rejection.

Safety and security If a client perceives that following medical advice may be harmful, this threatens their need for safety and security. One way to meet this need is to include the client in decisions about their treatment. They feel safer because they have some control over what happens to them (e.g. taking medication or changing diet). If the client's need for safety/security is not met then they may experience fear.

Fears Fear is an emotion that accompanies a client's thinking about their health. The client's fears can be reduced by health professionals recognising them and addressing them directly. Fears of side effects can be discussed openly in consultations to help the client understand what the risks really are. For instance, what does '1 in 1000 clients experience this side effect' mean in practical terms?

Evaluation

Practical application

One strength is that health education offers practical ways to improve adherence.

For example, Stephen Eraker *et al.* (1984) found that only 36% of clients understood the meaning of the phrase 'every 6 hours' (i.e. timing of medication). Vague language should be avoided and instructions should be specific (e.g. who needs to do what, where, when and why).

Therefore, research can play a useful role in identifying the barriers to adherence so that health professionals are aware of the issues that prevent compliance.

Access or quality?

One weakness of improving access to information is that it is not enough on its own.

The quality of the information is more important than access. Improving access to incorrect information may reduce adherence rather than increase it. For example, the 'information' spread by anti-vaccination groups on social media reaches many people but it has no basis in evidence and is mostly personal opinion.

Therefore, improving access without considering quality can backfire and lead to non-adherence.

Evaluation

Practical application

One strength is that considering perceived threats offers a specific way to improve adherence.

As well as perceiving a threat from treatments of an illness, many clients do not perceive *enough* of a threat from the illness itself. So, one intervention is suggested by the health belief model (see page 22) – what needs to happen is an increase in the perceived threat from illness, e.g. by emphasising that the client is a member of a vulnerable group.

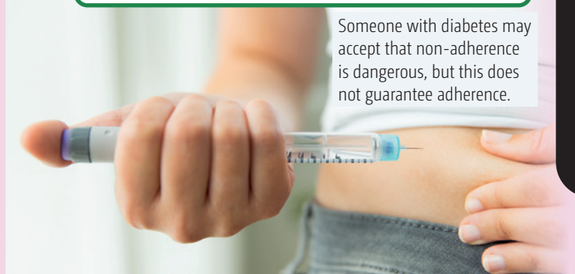
This means the client will realise there are benefits to adherence that outweigh the perceived threats of harm.

Perception–behaviour gap

One weakness is that reducing threat perception does not always change behaviour.

Interventions can help clients judge the risk of harm more accurately (e.g. from side effects). But this does not mean they go on to be more adherent. Different aspects of non-adherence have to be addressed. For instance, a client may understand the risk of harm accurately (cognitive) but may still be afraid that more physical activity could be dangerous (emotional).

Therefore, interventions should target multiple causes of non-adherence, not just reduce the perception of threat.



Someone with diabetes may accept that non-adherence is dangerous, but this does not guarantee adherence.

GET ACTIVE Health literacy

Psychologists use the concept of health literacy to describe how some clients have a poor understanding of health and illness. Clients whose health literacy is poor tend not to follow advice. Health education aims to improve clients' health literacy and so improve adherence.

You can measure your own health literacy by completing the Health Literacy Measure for Adolescents (HELMA). You can open it as a Word document here: tinyurl.com/3ren7c6e

1. *Do you think the items are relevant to adolescents?*
2. *Some items are about access to information, others relate to perceived threats. Identify some examples of each.*
3. *When assessing someone's health literacy, what do you think is the problem with items such as, 'I can easily understand the content of health information that I find'?*

Exam-style questions

Zee is 14 years old and has been diagnosed with Type 1 diabetes. She is supposed to follow a specific diet and inject insulin four times a day. However, she struggles to manage her diabetes, frequently eating the wrong things and forgetting to inject. Mak is a specialist diabetes nurse who is trying to find ways to help Zee manage her diabetes better. Mak realises that Zee needs more information to educate her about her health.

1. Explain how Mak can make health education relevant to Zee. (3 marks)
2. Identify **two** ways in which Zee's access to information about diabetes could be improved. (2 marks)
3. Explain how improving Zee's access to information given in your answer to question 2 could increase adherence. (3 marks)
4. Mak reasons that he might be able to help Zee more if he could understand her needs better.

   Identify **one** need relevant to Zee's adherence and explain how understanding it could improve her adherence. (3 marks)
5. Mak knows that Zee is afraid of the prospect of following a strict diet and injecting herself four times a day.

   Briefly outline how Zee's fears could be addressed to improve her adherence. (3 marks)
6. Assess **two** methods that Mak could use to help Zee improve her adherence. (9 marks)

An issue to consider

We've seen how important perception is in adherence to medical advice. Can you think of any other areas of health and illness where this is true?

Specification content

C3 Maintenance of behavioural change

Learners demonstrate knowledge and understanding of key concepts of theories and methods of behavioural change in relation to non-adherence and improved adherence to medical advice and explore their effectiveness. Learners apply these key concepts of theories and methods of behavioural change to scenarios.

Methods used to improve adherence:

- Health education/promotion – relevant to target group, improved access to information.
- Reduction of perceived threats – resistance, fears, understanding of needs, safety and security.

Methods used to improve adherence 3 and 4

The day my life changed

6 December 2011

'I had reached rock bottom, the lowest any person can go. I thought there was only one way out. One way to end the cycle of depression that had blighted my life from childhood. As part of my discharge I was referred to psychological services. As I sat there waiting for the assessment I saw a leaflet 'Creative Minds – Art for wellbeing'. I picked the leaflet up and rang the number. Come along to a taster session and see if you like it. So I did, and that's the day my life changed.'

This is Debs Teale's account of how her life changed. She says when she started to draw, something came alive in her. Her lifestyle changed and she became less stressed: 'Instead of the stress of life and the 1,000 mile an hour my brain raced at, it was slowing my brain down…'. She could focus on being a person rather than a patient: 'Art has given me a life, an identity, a voice and a future'.

Debs is now a Trustee for the National Centre for Creative Health (ncch.org.uk). She spreads the word about social prescribing – giving people non-medical options to help them change their lifestyles and become psychologically and physically healthier.

(Information from the NHS website tinyurl.com/32pfbv94)

Specification terms

Emotional resilience A person's ability to cope with stressful situations and return quickly to a pre-stress emotional state.

Social prescribing Healthcare practitioners help clients change their behaviour by referring them to support within the local community (e.g. groups, classes).

Using lifestyle changes to improve adherence

The main aim of adherence is to replace unhealthy behaviours with healthy ones. There are several ways to change lifestyle that can help with this.

Reduction in stress

Stress can undermine adherence by lowering motivation, so a client feels there is no point in changing their behaviour. Therefore, instead of simply targeting adherence, interventions should aim to help clients manage stress first and foremost. For example, some therapies aim to give clients the skills to cope with stress such as becoming more organised (which can make adherence easier).

Improved self-esteem and self-confidence

Some people lack confidence in carrying out healthy behaviours. An obese person may have tried physical exercise but lost very little weight, so they feel bad about themselves (low self-esteem) and also lose confidence. Interventions should prioritise boosting clients' self-esteem and self-confidence, for example through continuing support from healthcare professionals or others (e.g. joining an exercise group).

Emotional resilience

People who are *emotionally resilient* 'bounce back' quickly from setbacks. They keep going through the troubles that life presents them with. They are more likely to adhere to medical advice even when it seems easier to give up. The American Psychological Association (APA 2012) recommends increasing resilience by developing positive relationships, taking a positive outlook on life and even practising mindfulness (see page 80).

Insight into own behaviour

Sometimes a person's ingrained habits prevent them from adhering. For example, perhaps they have spent many years sitting rather than being physically active. One way to overcome this is to help the person become aware of their habits and to recognise them as 'mindless'. They gain insight into their own behaviour, identifying the reasons why they fail to make lifestyle changes.

Improved outlook on life

Optimistic people have a positive outlook on life (in contrast to pessimists). They are hopeful even when life is challenging, and think about the good things that could happen in the future without dwelling on past failures. Optimistic people are likely to adhere to medical advice because they focus on the positive changes that adherence can bring (e.g. better health).

Using behavioural change to improve adherence

Provision of incentives

One incentive to change behaviour is money. Kevin Volpp *et al.* (2009) showed that smokers who were given money to quit were almost three times more likely to stop smoking compared to smokers who were given only information. Money works because it is a powerful positive reinforcer of desired behaviour.

Persuasive health reminders

Persuasive reminders try to increase a client's motivation. They provide social and emotional support and not just information. They bridge the gap between a client *knowing* what they should do to benefit their health and the client actually *doing* it.

- **Persuasive texts** remind clients of their treatment goals (e.g. not to smoke, to remember to inject insulin) at high-risk and stressful times. Other persuasive texts offer encouraging messages to improve motivation (e.g. by stimulating positive thinking).
- **Self-tracking** uses technology, such as a mobile phone app, to count steps or track physiological indicators (e.g. heart rate), health-related behaviours (e.g. food choices) and even self-reported emotions.
- **Progress monitoring** is also provided by apps so a client can see improvement. This is persuasive because it increases a client's motivation when they see they are being successful.

Social prescribing

Health professionals often encourage their clients to consider non-medical options, such as volunteering or joining support groups. This is useful for clients with psychological disorders. For example, a client with depression may also be lonely so joining a volunteer group could benefit their mental health because they are mixing with other people. *Social prescribing* is often used when a client has complex or long-term needs.

Evaluation

Benefits are cumulative

One strength is that there are several lifestyle-related factors for interventions to target in order to improve adherence.

These factors are often linked, so addressing one also positively affects others. The result is the benefits 'add together' for a client (they are cumulative). For example, by improving a client's outlook so they become more optimistic, the client may also experience less stress and become more resilient and self-confident.

This shows that even making one lifestyle change can have positive knock-on effects, making adherence even more likely.

Vicious cycle

One weakness is that addressing lifestyle factors may not be enough to improve adherence.

For example, stressed clients often drop out of support. Ilaria Michelini *et al.* (2014) found that obese people with high stress levels consistently gave up support programmes early. So, the stressed person with obesity, for example, enters a vicious cycle in which they cannot stick to treatment intended to cope with their stress, so they do not adhere to treatment to tackle their obesity.

Therefore, adherence must be addressed directly and not just by trying to reduce stress (or any other single lifestyle method).

Evaluation

Practical application

One strength is that the methods of supporting behavioural change on this spread are used in persuasive eCoaching.

This is a broad approach that uses technology to support healthy behavioural change. Aniek Lentferink *et al.* (2017) found that eCoaching improved adherence in several groups of clients, especially when it was personalised. This involves tailoring the persuasive reminders to the client's own goals rather than taking a one-size-fits-all approach.

This shows that combining methods of supporting behavioural change is a highly effective way of improving adherence.

Low quality evidence

One weakness of social prescribing is that the research base for it is low quality.

A review by Public Health England (Mason *et al.* 2019) found that most studies have methodological problems, such as no control groups, no statistical analysis and small sample sizes. The best quality study found that social prescribing had no positive impact on health and wellbeing, even though there is great enthusiasm for the approach amongst healthcare professionals.

These issues mean that social prescribing may have some small benefits but it is not as effective as some claims suggest.

GET ACTIVE Stay hydrated!

Teachers at your school or college are concerned that many students are not drinking enough water. Fortunately, BTEC Applied Psychology comes to the rescue. Your psychology teacher asks you to create an action plan to encourage students to drink more water. This means you have to think about how to get them to change from unhealthy to healthy behaviours.

1. *Describe **at least three** practical steps the school/college can take to help students change their behaviour.*
2. *Write a brief analysis of how effective (or not) your action plan is likely to be.*
3. *Think about how you could apply the same steps in a different context (e.g. workplace) **and/or** for a different aim (e.g. eating your 'five a day' of fruit and veg).*

Texts can remind you to take medication or keep an appointment. They can also give you a boost when you have goals to meet.

Exam-style questions

Frank is obese and needs to change his lifestyle so he loses weight, becomes more active and takes medicine every day. He has tried to lose weight before and feels bad because it never works. But he does give up easily because he doesn't see the point. Frank also has a very high-pressure job so he works long hours. He spends his leisure time watching TV and playing video games.

1. Identify **two** lifestyle changes Frank could make. (2 marks)
2. Explain how **one** of these changes could improve Frank's adherence to medical advice. (2 marks)
3. Assess Frank's use of lifestyle changes to improve his adherence. (3 marks)
4. Frank hopes his doctor will prescribe medication so he doesn't have to change his lifestyle. But his doctor thinks there are other ways of helping Frank to make the changes.

   Define the term 'social prescribing'. (1 mark)
5. Explain how social prescribing could help Frank make lifestyle changes. (2 marks)
6. Explain how **one** other method of supporting behavioural change could help Frank. (2 marks)
7. Assess **one or more** method(s) of improving adherence that could help Frank. (9 marks)

An issue to consider

How do you feel about the idea that a professional might offer clients money as an incentive to change their lifestyles? What are the arguments for and against?

Specification content

C3 Maintenance of behavioural change

Learners demonstrate knowledge and understanding of key concepts of theories and methods of behavioural change in relation to non-adherence and improved adherence to medical advice and explore their effectiveness. Learners apply these key concepts of theories and methods of behavioural change to scenarios.

Methods used to improve adherence:

- Lifestyle changes – replacing unhealthy behaviours with healthy behaviours; reduction in stress, improved self-esteem and self-confidence, emotional resilience, insight into own behaviour, improved outlook on life.
- Support for behavioural change including provision of incentives, persuasive health reminders (texts, self-tracking, progress monitoring) and social prescribing.