Psychology

FOR THE IB DIPLOMA

SECOND EDITION

SAMPLE CHAPTER

Jean-Marc Lawton
Eleanor Willard

Contents

Internal assessment

Introduction

Psychology emerged from the earlier academic discipline of philosophy in 1879 in two different locations, when Wilhelm Wundt, in Leipzig, Germany, and William James, at Harvard University, USA, both independently set up laboratories for the testing of human mental abilities. This was in an age when science was being applied to many phenomena, including the physical and non-physical aspects of humans and animals. Psychology can thus be defined as 'the study of the mind and behaviour', with both scientific and non-scientific methods being used to achieve this aim, as not all aspects of mental life are seen as having direct physical counterparts.

Psychology consists of several, sometimes conflicting, approaches that reflect its philosophical origins and these are reflected in the IB specification's three core elements of the biological, cognitive and sociocultural approaches. This means that behaviour can often be viewed from different fundamental bases. For example, the formation and maintenance of romantic relationships could be seen from the viewpoint of physiological influences (the biological approach), such as genes, biochemistry and evolution. Then again it could be seen from the standpoint of mental processes (the cognitive approach), such as the consideration of the costs and rewards of a relationship, maybe in comparison to those of possible alternative relationships. Or then again it could be considered by reference to social and cultural influences (the sociocultural approach), such as the tendency for some cultures to favour voluntary relationships, while others prefer arranged marriages, with these tendencies reflecting cultural beliefs.

The first part of this book therefore considers these three approaches in some detail, with the ways in which they overlap and differ from each other being fully explored.

The second part of this book centres upon the optional topics featured in the IB specification and reflects upon how the three core approaches explored in part one can aid psychologists in their study and understanding of a range of topics, namely: human relations, abnormal psychology, health psychology and developmental psychology. There will be differences in how many of these options students need to study depending on which level of the IB qualification is being studied. These optional topics are featured in a way that closely matches the requirements of the IB specification.

A main element of the study of psychology is its focus on research, the methods by which psychologists actually study mental phenomena to acquire knowledge and understanding and then go on to create practical applications of use to society, such as relationship counselling and matchmaking. As mentioned earlier, research methods combine both scientific and non-scientific means, with each having their strengths and weaknesses. There is focus upon relevant research methods and studies throughout the chapters on psychological approaches and the optional topics, but there is also a separate chapter on research methods, which provides both descriptive and evaluative content. Focus upon ethical issues and considerations of conducting research on both humans and animals is also something that is explored in regular fashion throughout the book, while also featured is a chapter giving guidance on how to plan, execute and write up the practical assessment, which is an integral assessed part of the course.

The text of the book is divided into elements that students and teachers will hopefully find engaging and helpful to their learning. Descriptive elements feature heavily – for example, descriptions of theories and models that try to explain behaviour, such as the multi-store model of memory (MSM), which sees memory as consisting of separate stores between which information flows. Research evidence also appears as a regular, separate feature, such as studies that support or conflict with the MSM, with another regular, separate feature being that of evaluative points, such as those detailing the strengths and weaknesses of the MSM. Other regular features, which are often colour-coded for ease of access, are ones that are designed to widen and reinforce students' learning, again in an engaging and motivating manner.

Features of the book

Quotations – *pithy sayings that are designed to provoke thought and give insight into the subject matter being learned.*

Key terms – concise statements that define the meanings of important concepts and operate as retrieval cues for the recall of more detailed knowledge.

IN THE NEWS

Written in the style of an imaginary psychological newspaper, this feature highlights topical news items that illustrate central psychological themes of the topics being discussed, as well as illustrating the central role of psychology in everyday human experience.

FOCUS ON…

An introductory feature for each topic that summarizes in bullet point form the main elements of study that will be featured.

Links to the main approaches

An occasional feature describing how elements of topics being studied relate to the biological, cognitive and sociocultural approaches.

You are the researcher

A feature that focuses upon research methods from the viewpoint of the design of psychological studies. Designed to help foster a greater understanding of why and how psychologists conduct research and assist in the development of the necessary skills for students to plan and undertake their own research.

Research in focus

Using examples in the text, this feature gets students to think about methodological aspects of research studies and asks relevant questions to stimulate learning and understanding.

PSYCHOLOGY IN THE REAL WORLD

Examples of relevant practical applications of psychology that showcase its usefulness within real-world settings and help to form a valuable source of evaluative material for assessed work.

TOK link

A feature centred on exploring how elements of topics being studied relate to a consideration of what knowledge actually is and how we can determine the validity (accuracy) of such knowledge.

Strengthen your learning

Found at the end of each section, this feature focuses upon an appraisal (consideration) of the material covered. Acting as a form of comprehension (understanding) exercise, the questions are used as a means of revision to boost knowledge and understanding before attempting the questions found at the end of each topic.

About the authors

This book has been written by the gruesome twosome of Jean-Marc Lawton and Ellie Willard.

Jean-Marc Lawton is an established writer of psychology books, revision books and study guides. He has many years' experience of lecturing in psychology and was the head of a very academically successful psychology department. He has also been a senior examiner for many years, including for the IB. He currently resides in the Scottish Highlands and has interests, aside from psychology, in conservation, ultra-running and unlistenable music.

Jean-Marc would like to thank his wife, Mara, for all her support (and the flapjacks) and Ellie of Tadcaster for her support and assistance. His part of this book is dedicated to the memory of his father, John, 'the mirror to my future'.

Jean-Marc wrote the following chapters in this book:

- Cognitive approach to understanding behaviour
- Approaches to researching behaviour
- Abnormal psychology
- Psychology of human relationships
- Internal assessment

Eleanor Willard is a Senior Lecturer in Psychology at a university in Yorkshire, England. She has written several psychology text books, been a psychology examiner, devised teaching resources and taught psychology to audiences at many stages of education, from introductory level psychology to Masters level courses.

Eleanor would like to thank her support network for their help while she contributed to this book. You know who you are. Much love. Thanks to Jean-Marc too for being a superlative advisor and providing plenty of banter. Eleanor would like to dedicate her part of the book to her parents, Harold and Frances, her nature and her nurture.

Eleanor wrote the following chapters in this book:

- Biological approach to understanding behaviour
- Sociocultural approach to understanding behaviour
- Developmental psychology
- Health psychology

7 Health psychology

'Healthy citizens are the greatest asset any country can have.'
Winston S. Churchill

Introduction

Health psychology considers both physical and psychological health and well-being. By understanding the thought processes, external factors and biology involved in engaging in health behaviours, both good and bad, health psychology can work in both a reactive and proactive way to try and raise the general health of the population.

It considers how health can be affected at the biological, cognitive and sociocultural levels. If you consider an individual and their health, it is clear that their biology can affect how they feel (for example, via a virus or tumour) but the way that they think and the beliefs they hold, such as how likely they are to recover, can also have an effect. These beliefs will also affect how likely they are to take part in healthy/unhealthy behaviours. Sociocultural factors such as their ethnicity and level of wealth will also be an influence on how healthy they are.

Health psychologists are widely involved in providing insights into 'good' and 'bad' health behaviours and their input in health promotion can be invaluable. This section considers the areas of health determinants, health problems and health promotion.

Determinants of health

> **FOCUS ON...**
>
> ■ Understanding and evaluating the biopsychosocial model of health and well-being.
> ■ The influence of dispositional factors in determining health.
> ■ How health beliefs can affect the health of the individual.
> ■ The influence of both risk and protective factors on health.

■ Biopsychosocial model of health and well-being

Biomedical – relates to both biology and medicine.

Psychosomatic – when a health condition may be caused, or made worse, by a mental factor such as internal conflict or stress.

Holistic – consideration of the whole person, including psychological and social factors as well as biological symptoms.

For many years the **biomedical** model of health and well-being was the dominant explanation for health. This means that healthcare within society was viewed and organized around this perspective. There were key assumptions made by the model.

The core assumption was that ill health and sickness came from the environment in a biological form such as a bacteria or virus. All illness was caused by a biological reason. As such, the individual who was ill was in no way responsible for becoming sick. This also meant that illness was seen as a change in the physical state of the individual and that a return to health meant that the physical change should be treated biologically or physically by a health professional. This model also was dichotomous in that it sees individuals as either healthy or ill.

In the twentieth century, this model was moderated by the introduction of **psychosomatic** and behavioural medicine. Psychosomatic as a word is a combination of psych (mind) and soma (body). This was introduced following the publication of Sigmund Freud's ideas.

So there was an acknowledgement of the role of mind in health, and the introduction of behavioural medicine introduced the idea of preventative medicine; changing how an individual behaves to maintain health.

Health psychology as a discipline sees illness differently from the biomedical model. It does not regard poor health as having a purely biological cause and has replaced this idea with the health of an individual being due to a complex system of interacting forces. This is a **holistic** viewpoint. The shift means that they see an individual as responsible for their own health. Treatment is advocated using a series of professionals who can help with all aspects; treatment is

no longer seen as the domain of doctors only. The dichotomous viewpoint of healthy/ill is also argued to be outdated and most health professionals would advocate seeing health/illness along a continuum, with full health at one end and very ill at the other. Health is ultimately seen as an interaction between body and mind. One model which acknowledges this interaction is the biopsychosocial model.

The biopsychosocial model

This model acknowledges both the influence of biology and psychology in illness but also highlights the influence of environmental factors such as poverty and working conditions. It was developed by **Engel (1978)** and is an integrative model.

Engel stated that there were three key elements to health and illness – biology, psychology and social – all with relatively equal influence on health.

The biological element referred to all the causes focused upon by the biomedical model. These included viruses, bacteria and damage to physiology (such as a stroke causing a brain lesion). The second element, psychology, focused upon the behaviour of the individual in terms of lifestyle choice (smoking, drinking alcohol, etc.) and their thought processes (their beliefs). Their resilience in terms of coping is also part of this element, together with perceived stress and pain levels. The third element, which incorporates research in such fields as sociology, is social factors. These refer to such influences as class, ethnicity, employment and wealth. With the factors come 'norms' of behaviour, such as whether you should smoke or not, and pressures from family and peers. For the social element of the model, it is acknowledged that there is massive variability in terms of the extent to which someone may become ill. For example, two people may have a cough that has been present for three weeks. One of these people may realize that this could be an indication that something serious is wrong so they seek advice from a GP. However, the other person with the same condition may be part of a family unit who do not advocate seeing a doctor, and therefore a more serious illness, such as lung cancer, could be missed.

Culture too plays a part in the model at this level. A culture can determine whether an individual is likely to seek help for their medical problem, or not. It can equally affect the adoption of protective behaviours to maintain good health. An example of this is screening for illness or inoculation against illness. Sub-cultures too can have an effect. For example, **Zola (1966)** noticed that Italian Americans report a larger number of symptoms than Irish Americans. However, the Irish Americans reported many more issues with respiratory problems, particularly the ear, nose and throat. There is no clear reason for this difference other than cultural norms.

TOK link

Reductionism can be defined as the attempt to explain any act by reducing it to a simpler level. Holism, however, is when the interaction of different factors affecting a behaviour is taken into account in an explanation – it does not focus on one specific part of an explanation. Reductionism is often a criticism levelled at explanations for behaviour in psychology. The biopsychosocial model of health behaviour considers many levels of behaviour. It is therefore a holistic model.

■ Research

- The impact of the biopsychosocial model was measured by **Miró *et al.* (2009)** in patients with muscular dystrophy (a muscle wasting disease that is genetic). They looked specifically at the chronic pain the patients were experiencing from their condition. They asked 182 patients to complete a series of questionnaires about their pain levels, psychological and demographic factors, together with any injuries they had. Psychological functioning measures were also included to assess the cognitive aspects of their pain. It was found that all the elements, biological, social and psychological, played a part in the patients' pain experience, which strongly supported the model and helped the researchers to identify key factors in pain management for people suffering from muscular dystrophy.

- **Habtewold *et al.* (2016)** applied the biopsychosocial model to patients who had been affected physically by Type 2 diabetes and psychologically by depression. They examined the extent to which social variables should be taken into account to reduce levels of depression. They found that marital status, negative life events and poor social support all played a part in the levels of the depression experienced. This supports the idea that social factors are influential and that all three elements of the model need consideration for treatment of the patients.

- Further support for the biopsychosocial model was found by **McNamara & McCabe (2012)**, who looked at explaining the exercise levels taken by elite Australian athletes. The researchers were interested to see what exercise dependence was related to within the athlete's world. A holistic approach was taken in the research, when they compared athletes who indicated exercise dependency (using a measure) and those who did not. They found there were differences at the physical level (in terms of higher body mass in 'dependent' athletes) and also at the cognitive level in terms of their beliefs relating to exercise. They also had lower levels of social support and higher levels of pressure from coaches. McNamara & McCabe suggested that the explanation needed to take all the levels of explanation into account to satisfactorily explain exercise dependence and that no one factor alone was responsible for the behaviour.

■ Evaluation

- The biopsychosocial model of health has been embraced within the profession. For example, in terms of psychological illness, addiction is acknowledged as having all three elements and influences in the DSM-V, the manual used for diagnosis of mental disorder. There is mention of biological mechanisms such as brain reward circuitry, cognitive influences such as memory and genetic and environmental influences. These are discussed in detail in this chapter.

- Engel has been criticized for merely acknowledging the factors that affect illness and not the impact of illness on those factors. His critics argue that he does not make a full holistic argument. They say there is a two-way exchange of biological, psychological and social factors. So, for example, the world of a patient includes all three types of influence of their health but, in turn, their health has an effect on the three areas of biology, psychology and social factors too, like feeling pain, which then affects the patient's mental health and consequently the close family are affected too.

- Critics also argue that there is more emphasis on certain factors than others within the medical profession. For example, some practitioners focus on the physical or biological elements because they may be easier to treat. It is argued that it is difficult for practitioners to consider all three levels of influences. With a limited amount of time and resources it is difficult for those treating illness to find out about all the elements of the illness and the patient's life. Therefore, the treatment of the biology is very often the focus of their work.

- By shifting the focus from the biological model to the biopsychosocial model the focus on blame can be argued to shift from the biology of an individual, which some see as out of their control, to elements such as how they think and interact being a factor in their illness. This can appear as if the blame lies with the patient and this is, for some, victimizing them again.

Strengthen your learning

1 Outline the biopsychosocial model of health and well-being, including focus on:
   a biological
   b psychological
   c social
   d cultural and sub-cultural factors.

2 Summarize what research has suggested about the biopsychosocial model of health and well-being.

3 Assess the biopsychosocial model in terms of strengths and weaknesses.

■ Dispositional factors and health beliefs

IN THE NEWS

Ψ The Psychological Enquirer

ANT MCPARTLIN IN REHAB FOR DRUG ADDICTION

Ant McPartlin, one-half of the celebrity duo Ant and Dec, was admitted into a rehabilitation clinic for drug addiction. He stayed in the clinic for two months while he was treated for painkiller addiction and alcohol dependency.

The addiction is believed to have started following a knee operation two years ago, when Ant was prescribed painkillers to help him cope with the pain. Ant also explained how he had started drinking heavily, so alcohol abuse was also an issue. He was urged to seek help from his friend Declan Donnelly and his wife and family. The presenter stated how doctors told him he had come close to killing himself with the behaviour.

Following two months of rehab Ant left the clinic and reported that he felt well and positive. The general public reacted to this news with surprise and sympathy. There were many well-wishers as Ant McPartlin is a popular celebrity. The story illustrates how addiction can affect someone who has a seemingly good and successful life.

It is recognized that there are dispositional, risk and protective factors that can increase or decrease chances of health behaviours in everyone. Addiction is one of those health behaviours and will be examined in this chapter.

There are direct and indirect influences on health. For example, beliefs can lead to a direct effect, such as feeling that you are very stressed at any point in time having an immediate physical effect on your biology. However, it could equally prompt you to adopt a behaviour such as smoking a lot of cigarettes or drinking heavily, which will have a detrimental effect in the long term.

Dispositional factors

Dispositional factors are internal factors that affect health and are characteristics of an individual. They can include anything from genetics to personality and are mostly indirect and out of the individual's control (to some extent), but this does not make them any less important. Genetic vulnerability and personality are considered with regard to health behaviour below. This section looks specifically at addiction. Probably the best way to describe addiction is to refer to the diagnostic manual to see what is now defined as dependence. This varies depending on whether it is dependence on substance (like nicotine) or behavioural (like gambling). Alcohol is given separate diagnostic criteria, which are similar to substance-related addiction. There is a list of 11 symptoms, of which two need to be evident for diagnosis to be made. They also need to be present together in the same 12-month period. Examples of the indicators are:

- taking the substance in larger amounts, or for longer than intended
- wanting to cut down or stop using the substance, but not being able to
- spending a lot of time getting, using, or recovering from use of the substance
- cravings and urges to use the substance
- not managing to do what you should at work, home or school because of substance use.

It is evident that the symptoms of a problem do not vary significantly from each other. Broadly speaking, there are key behaviours such as over-use, taking the substance even when you know it is bad for you, problems maintaining everyday activities and ineffective efforts to stop.

Genetic vulnerability

There is thought to be a genetic influence on development of addiction, much like many other behaviours. **Nielsen *et al.* (2009)** compared DNA from former heroin addicts and non-addicts, and they found a connection between the genetics of the individual and their genetic make-up.

However, it is absolutely necessary for there to be a gene–environment interaction for this to occur. The individual will plainly not become addicted if they are not exposed to the substance or the opportunity within their environment. Therefore, genetic vulnerability should be seen as an interaction.

Twin studies have been useful for picking up on a heritability component to addiction. So too have linkage studies of addiction to substances and genetic make-up. These have shown an association between genes and: 1) alcohol (**Foroud *et al.*, 2000**); 2) nicotine (**Li *et al.*, 2004**); and 3) cocaine (**Gelernter, 2005**). Twin studies are useful for picking up on genetic vulnerability because the incidence rates in identical twins (who are 100 per cent genetically similar) and non-identical twins (who are only 50 per cent genetically similar) can be compared. Other linkage studies have found a similar relationship.

The way genetics can increase our likelihood of becoming addicted when looking at substance addiction is the way our body responds to a drug. We can be more susceptible to its positive or negative effects. In the case of alcohol, the way the genetic code affects the likelihood of addiction is the way in which alcohol is metabolized by the body. The first reaction of our body to alcohol is to metabolize it to acetaldehyde then to acetic acid. The acid is released into our urine very quickly, otherwise we can feel nauseous. In about 50 per cent of people from Asia, their genetic code does not facilitate the release of the acetic acid into the urine so they feel nauseous when drinking alcohol. Clearly this means their chance of addiction is slim to none.

> **LINK TO BIOLOGICAL EXPLANATION**
>
> Genetic vulnerability is a biological dispositional factor in its purest form. The vulnerability cannot be controlled in any way and is determined at conception.

■ Research

- **Tsuang *et al.* (1996)** used data from the Vietnam Era Twin Registry to evaluate the genetic influence on addiction. They looked at the records of 3000 male twins. To define addiction, they deemed it to be the use of an illegal drug at least once a week. The data showed that there was a significant difference in the concordance rates of MZ (identical) and DZ (non-identical) twins. This suggests that there is a genetic component to the addiction.

- **Kendler *et al.* (1997)** found that the concordance rates for alcohol abuse in MZ twins were significantly higher than for DZ twins. The data was gathered from the Swedish Twin Registry and the sample size was large, at almost 9000 twin pairs. The data had been collected over a 40-year period and the researchers found that the heritability figure stayed constant over time. This too suggests that there is a genetic component to addiction.

- **Kendler & Prescott (1998)** compared concordance levels of drug abuse among MZ and DZ twins. The classification of drug abuse was the criteria set out by DSM-IV and data from nearly 2000 twins was used. They found concordance rates for using, abusing or being dependent on drugs were higher for MZ than for DZ twins. For cannabis use, concordance was 54 per cent for MZ twins against 42 per cent for DZ twins. For lifetime cannabis abuse, concordance was 47 per cent in MZ twins against 8 per cent for DZ twins. For cannabis dependence, concordance was 35 per cent in MZ twins against 0 per cent in DZ twins. These figures indicate there is a genetic link to use of drugs.

- **DiFranza (2008)** found that 10 per cent of teenage smokers who went on to be nicotine addicts had strong cravings for smoking two days after first inhaling and 35 per cent within one month, suggesting that nicotine is strongly addictive, with long-term use not necessary for addiction. The fact that those who had cravings early on were 200 times more likely to become daily smokers suggests a genetic vulnerability. It seems that they are genetically more susceptible to feeling the effects of the drug.

Evaluation

- There seems to be a wealth of research indicating that there is a genetic vulnerability to addiction, although no concordance rates in twin studies have ever shown 100 per cent concordance, so it is clearly a genetic predisposition rather than a certainty.

- It appears that the genetic link to addiction varies across substances, which means that the vulnerability is not general but specific to certain substances. This, in turn, means that if an individual is never exposed to the substance they will never realize that they have that genetic vulnerability, as they may not react in the same way to other substances.

- The role of the environment is also vital in considering genetics. This is particularly so with addiction, as many factors affect the predisposition to addiction, such as exposure to the drug, availability, stress, family influence and peers.

- There may be a fundamental issue in drawing conclusions from twin studies, as MZ twins are more likely to be treated similarly by parents than DZ twins. This means that concordance rate differences may be accounted for by upbringing rather than genetic similarity. This weakens the argument for a genetic vulnerability to addiction.

Personality

It is argued that people who have pathological personalities are more likely to become addicts because the drug or behaviour they are addicted to initially offers them a relief. Pathological personalities are types that have a predominantly negative persona. Their personality means they may be more stressed and find life difficult. The temporary high gained from playing a fruit machine or drinking a vodka and tonic, for example, would make them more likely to keep doing it. This means ultimately that the personality triggers the addiction rather than the other way round.

Addictive personality

> **Neuroticism** – a personality characteristic that is characterized by high levels of worry, anxiety and depressed mood.
>
> **Psychoticism** – a personality characteristic that is characterized by high levels of aggressiveness and hostility to others.

Various theorists have proposed the existence of an addictive personality. **Eysenck (1997)** outlined a model that suggested addictions occur because of personality type and the needs of the personality. He argued that those with high **neuroticism** levels were predisposed to addictions. Neuroticism is characterized by high levels of anxiety and irritability. He also added that high levels of **psychoticism** were linked to addiction because this meant that the individual was aggressive and emotionally detached, so the high associated with drugs or certain behaviours helped this.

Eysenck also argued that there was a biological basis to personality and therefore the personality was inherited. Following this argument through, it would seem to suggest that someone is born with a predisposition to their personality.

Cloninger's (1987) tri-dimensional theory of addictive behaviour suggests that there are three key traits – novelty seeking, harm avoidance and reward dependence – that make an individual liable to substance abuse.

Novelty seeking is the need for change and stimulation. Individuals will actively seek new environments and experience, almost as if they have a low boredom threshold. This element makes them more likely to seek out sensations from drugs.

Harm avoidance is the amount that a person worries and sees the negative elements of a situation. This can affect their likelihood of taking a drug and therefore becoming addicted to it. Cloninger's theory suggests that addiction occurs in individuals with a low level of harm avoidance.

Reward dependence in an individual is when someone reacts and learns from a rewarding situation quickly. This also predisposes them to addiction, as the rewarding effects are experienced quickly and easily.

LINK TO THE COGNITIVE EXPLANATION

Personality is defined as a cognitive dispositional factor, as it is a pattern of thought processes that leads to behaviour.

KEY STUDY

CONTEMPORARY RESEARCH

'The relationship between stress, personality, family functioning and internet addiction in college students'
Yan *et al.* **(2014)**

This section considers the dispositional factors in health behaviours, specifically addiction. The research conducted by Wansen Yan et al. *examined the different potential influences underpinning internet addiction. This addiction could also inform researchers on other addictive behaviours such as gambling.*

Aim

The researchers' aim was to examine whether there is a relationship between stress levels, personality traits, and family functioning in relation to internet addiction.

Procedure

1 892 participants (407 males and 485 females) had complete data sets out of an original sample of 1065 college students. They were selected from across China.

2 Each participant completed five measures using a questionnaire format.

   a Demographic variables. A questionnaire was used to collect data on gender, age, education grade, university and province.

   b Family functioning. To measure how well the family of each participant functions, the researchers used the Family Adaptability and Cohesion Scale, a 30-item measure that looks at the adaptability and cohesiveness of the family, examining such things as the strength of the emotional bond between members and the level of connection between members.

   c Addiction level. The Chen Internet Addiction Scale was used for this purpose. It is a 26-item scale, which considers compulsive use, withdrawal effects, tolerance, time management, interpersonal problems and health problems.

   d Personality. The Eysenck personality questionnaire was given to participants. This had 48 items with yes/no response options that measured the level of extraversion, neuroticism and psychoticism for each participant.

   e Stress. To measure stress levels the researchers administered the Adolescent Self-rating Life Events checklist, which looks at the amount of life change the individual has been through in the last 12 months. There is a positive correlation between the number and degree of life changes experienced and stress.

Results

1 It was found that almost 10 per cent of the sample had severe internet addiction and just over 11 per cent (100 students) had mild internet addiction.

2 No link was found between the demographic variables and level of addiction.

3 The group with severe addiction had low family functioning levels, implying that poor family relationships were influential. However, this could have occurred after the addiction.

4 The severely addicted group also had higher levels of neuroticism and psychoticism and lower levels of extraversion, as indicated by the personality questionnaire.

5 The severely addicted group had higher scores on the life changes measure than the non-addicted participants, which suggests they had experienced higher levels of stress over the previous 12 months. The mildly addicted students answered no differently to the non-addicted participants on the measures of personality.

Conclusion

To conclude, it appears therefore that personality, stress and family functioning all play a part in addictive behaviour.

Evaluation

- The psychological processes underlying these factors were not in any way tested by this research. It is merely correlational, so only a relationship can be ascertained. This means that the factors could be vulnerability factors, or they could equally be by-products of being addicted. Looking, for example, at the family functioning measure, it is possible that a consequence of the severe internet addiction experienced by about 100 of the participants could have placed considerable strain on relationships due to their lack of interaction at home and at social occasions.

- The fact that there was missing data from so many students may mean that the sample is biased, as it is essentially self-selecting. It could be that some students who were severely addicted did not wish to contribute their data. Exactly how this would affect the outcome is not known, but caution should be used in drawing conclusions from the figures showing the number who were severely/mildly addicted. It is possible this is higher in the college student population because internet-addicted individuals may be less likely to fill out the questionnaires as they have other priorities, such as being on the computer. This means the exact relationship cannot be established. The number of measures used would have meant there were a lot of questions to answer, so it is possible that participants dropped out because they found the procedure too time-consuming.

Research

- **Howard *et al.* (1997)** in a meta-analysis of the studies investigating Cloninger's tri-dimensional theory found that novelty seeking does predict alcohol abuse in teenagers and young adults. It also predicts anti-social behaviour in those alcoholics. However, harm avoidance and reward dependence do not seem as clearly linked to addictive behaviours and the relationship is less consistent. This suggests all three dimensions do not contribute to addictive behaviour equally and that personality may not play a key part in addiction.

- Work by **Zuckerman (1983)** on sensation seeking shows a link between the need for novelty and addictive behaviours. Cloninger's novelty seeking and Zuckerman's sensation seeking are very closely linked, so this supports Cloninger's ideas too.

- **Yan *et al.* (2014)** (see 'Contemporary research' above) show that there is a relationship between personality characteristics and addiction. The research looked specifically at Eysenck's theory and found evidence to suggest that high levels of neuroticism, high levels of psychoticism and low levels of extraversion were linked to internet addiction. These findings support Eysenck's ideas, although the low levels of extraversion found in the study contradict Cloninger's theory that novelty seeking is a characteristic predisposing an individual to addiction. Extraversion is a personality characteristic that seeks out stimulation, so this would suggest that extraversion would be at a high level in addicts, if Cloninger's theory is correct.

■ Evaluation

- There is evidence to suggest that personality traits are implicated in an individual's likelihood of becoming an addict. However, to argue that there is an addictive personality that is inherited seems less plausible.

- The possession of certain traits does not automatically mean that addiction will occur; it is merely a predisposition. There are lots of other factors involved that influence the behaviour.

- Evidence suggests that certain traits are high in predictive validity with regards to addictive behaviour. However, the research indicates only likelihood and cannot fully explain the mechanism or cause underlying the behaviour. This makes it incomplete.

- The role of personality in addiction is complex as cause and effect is difficult to establish. This means that it is not always clear whether the addiction has altered the personality or vice versa, that is, has the individual's personality predisposed them to addiction?

YOU ARE THE RESEARCHER

Personality is often measured using questionnaires. If you were to design a questionnaire to test Cloninger's theory, what kind of items would you include? Remember that your questionnaire would have to test all three dimensions of the personality.

What ethical considerations would you have to take into account with your questionnaire?

How could you test the validity of the questionnaire you developed?

Health beliefs

There are several key theories for beliefs about health and this section outlines three: the health belief model, the theory of planned behaviour and Prochaska's six-stage model of behaviour change.

Health belief model

This model was generated in the 1970s to understand why preventative behaviours were not employed by individuals to protect their health. The take-up rate of screening, for example, was lower than expected. It provides a way to ascertain the likelihood of someone using the facilities and services available to them, adding insight into the actions of the population.

Likelihood of engagement is established by looking at how at risk individuals feel they are and whether they evaluate the service/facility positively.

There are key elements in the model centred on individual perceptions, modifying factors and likelihood of acting. In terms of individual perceptions, the perceived susceptibility to the consequences of not acting and the perceived severity of not acting (i.e. Will it kill me, or am I at risk with the intervention?) influence the behaviour. Modifying factors also include the benefits of acting (Will I feel fitter?), demographic variables such as age (I am too old to try), the threat level (This will definitely kill me if I do not do it) and cues to action (such as the health promotion campaign or the death of a loved one). Finally, the likelihood of action relates to the costs, barriers and benefits of acting, for example the accessibility of a service or the likelihood of making friends.

This model is illustrated in Figure 7.1.

Individual perceptions   **Modifying factors**   **Likelihood of action**

Age, sex, ethnicity, personality, socioeconomic, knowledge

Perceived benefits minus perceived barriers

Perceived susceptibility and severity

Perceived threat

Likelihood of behaviour

Cues to action
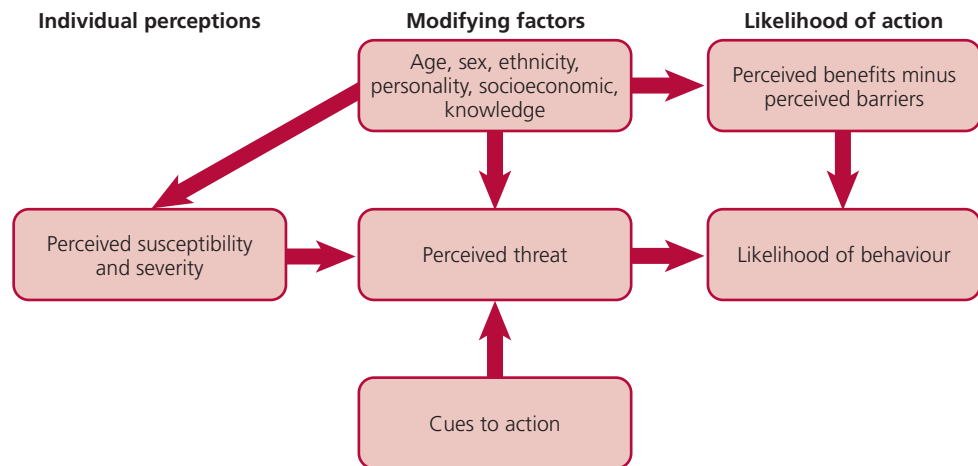
■ **Figure 7.1** Health belief model

Research

■ **De Wit & Stroebe (2004)** make the point, when reviewing the health belief model, that a questionnaire has not yet been developed that tests the model in its entirety. There are ways of measuring each component, but not the model. This means that the model's predictive validity (i.e. how much it can actually predict the likelihood of acting upon a behaviour) is difficult to ascertain. It also means that each of the elements may be viewed differently by different researchers. In effect, there is no clear definition for each element in terms of experimentation, yet.

■ **Gorin & Heck (2005)** found that the model was able to predict the uptake for a cervical cancer screening programme reasonably accurately. In the study they found that demographic variables such as age and marital status played a large influence in uptake. This supports the health belief model.

■ **Wringe *et al.* (2009)** conducted research in rural Tasmania into uptake for an HIV treatment programme. They found that the biggest determinant of uptake was the accessibility, which acted as a large barrier for some individuals. This demonstrates that the most influential factors in the model can vary from country to country.

Evaluation

■ There is no account of the emotions involved in the decision-making process. The model acts as if an individual is rational, but decisions are often emotive and there is no evidence of this as a modifying factor. Some researchers argue this is accounted for within the model in the cost/barriers and cues to action section because phobia of hospitals would act as a barrier and the death of a loved one would act as a cue to action, but there is no acknowledgement of emotion as a mediating influence per se.

■ The model is argued to be good for explaining individual behaviours such as attending a screening test or having inoculations. It is, however, not able to explain general attitudes to health. Looking at the development of the model, however, it was designed to examine likelihood of uptake of a behaviour, so it can be argued that the model is fit for purpose.

■ The lack of a questionnaire to measure the model as a whole means that the model has never been tested as a whole entity and this has implications for its validity. However, as the model does not claim to calculate the likelihood quantitatively, it is perhaps sufficient that it brings all the various elements involved in decision-making together.

■ The research from **Wringe *et al.* (2009)** above suggests that although the model is cognitive, there is cultural influence on beliefs. Therefore, the model should take this into account and identify where this may occur.

The theory of planned behaviour

The theory of planned behaviour is a refinement of the model of reasoned action, which stated that a change in addictive behaviour was underpinned by decision-making processes. **Ajzen (1991)** developed the model to explain how beliefs affect behaviour change and it is a general model that can be related to many health behaviours, including addiction. In terms of addiction, the model may explain why someone might be successful in quitting addictive behaviours and why someone else might not.

The core idea of the model is that if we are to predict the outcome of a treatment programme, we need to consider the beliefs, influences and motivation of an addict to the proposed change. There are four parts to the model:

1 *Attitude and behavioural beliefs.* Behavioural beliefs are the attitudes towards the behaviour. In the context of addiction, this would be a recognition that the behaviour is having a negative effect on the addict and that giving up is a good idea. This is key to the process of recovery.

2 *Subjective norms and normative beliefs.* Normative beliefs are the beliefs of the group to which the addict feels they belong. If, for example, a drug addict was surrounded by friends who were also addicts and did not wish to give up, then the likelihood of the addict joining a treatment programme and staying on it would be diminished.

3 *Perceived behavioural control.* Control beliefs focus on the factors an addict believes are present and that may affect the treatment. It is very much their perceived idea of the situation and not the reality. So, for example, if they think that they cannot ensure they will attend sessions or stay away from situations that challenge their resolve, the likelihood of the treatment working for them is decreased. This is not particularly what will happen, more what they believe will happen. It should be noted that Ajzen proposed that perceived control was linked directly to behaviour and could therefore be a predictor of behaviour on its own.

4 *Behavioural intentions.* The behavioural intentions are a combination of the other three factors. These all contribute to the level of intention, which is essentially the motivation to engage with the programme. This process is illustrated in Figure 7.2.
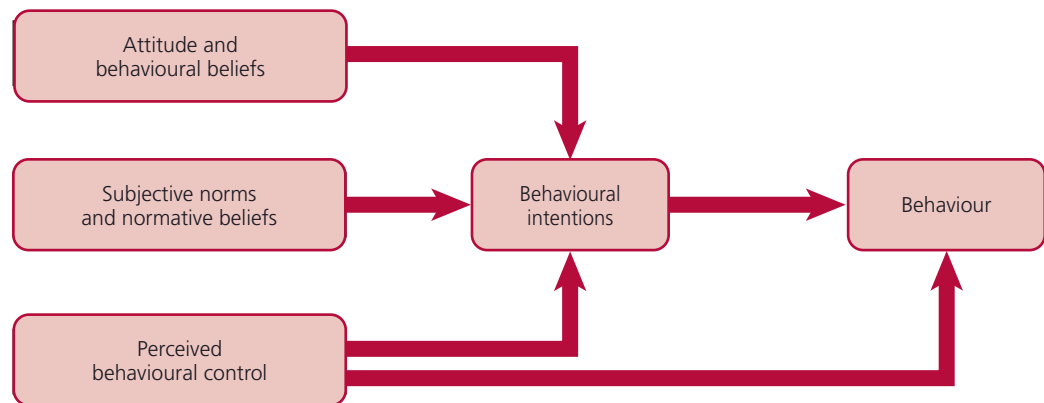
■ **Figure 7.2** Theory of planned behaviour (Ajzen, 1991)

The theory of planned behaviour is used by practitioners to predict the outcomes of potential treatment programmes. They can establish why someone wants to quit and the amount of resolve they have to do so. The first section of the model, which focuses on behavioural beliefs, is important to ensure they access the treatment initially. The second stage of normative beliefs ensures the social support is present and that negative peer and family influence can be dealt with. The final section of perceived control is a good indicator for the success of the programme. If an addict does not believe that they can stop their addictive behaviour, for example by stopping gambling or giving up smoking, it is unlikely that they will do so.

■ Research

- **Webb & Sheeran (2006)** conducted a meta-analysis of 47 studies using the model. They found that the level of intention is linked to behavioural change, but that the link is small, so scoring high for intention with the model actually only prompts a small behaviour change. This suggests that the theory can explain behavioural change, but to a lesser degree than originally thought.

- **Godin & Kok (1996)** reviewed how successful the theory was for predicting health-related behaviours generally. Their findings were positive, showing a significant correlation between the behaviours and the intention level predicted by the model. They also found that the level of perceived behavioural control made a significant contribution towards predicting the behaviours in half of the studies.

- **Oh & Hsu (2001)** used a questionnaire to assess gamblers' previous gambling behaviour, their social norms, attitudes, perceived behavioural control (such as perceived gambling skills and levels of self-control), along with behavioural intentions. A positive correlation was found between attitudes and behavioural intentions and actual behaviour, supporting the model.

- **Walker *et al.* (2006)** used interviews to assess whether theory of planned behaviour could explain gambling behaviour. They found that behavioural beliefs and normative beliefs were important, but that perceived behavioural control was not. Intention was, however, found to be a good predictor of behavioural change. This seems to support some elements of the model but not others.

■ Evaluation

- The theory is used widely in health psychology and health economics (which looks at cost-effectiveness of treatments). This suggests that practitioners acknowledge its validity and deem its predictive power as useful.

- There is no consideration of emotion within the model, which can influence the likelihood of behavioural change. This is especially the case with addiction, which is a vulnerable state and influenced by mood.

- A strength of the model is its acknowledgement of the role of peers in influencing behaviour. This influence does not stop once the behaviour is developed and therefore should be considered in predicting outcomes of behaviour change programmes.

- The model relies on self-report measures to gauge its effectiveness. This is a potential problem as the participants could be irrational and liable to downplay the level of their addiction. This means that the effectiveness measures may be unreliable.

- The practical application of this model is one of its strengths. Practitioners can use it to decide whether an intervention will be effective, and as such, time and money are not spent if it is not going to be effective for the individual.

Prochaska's six-stage model of behaviour change to addictive behaviour

Prochaska's (1977) model offers an explanation for the process of changing from unhealthy to healthy behaviours. He and his colleagues felt that change of behaviour was often portrayed as an immediate jump from unhealthy to healthy and that in reality this was simply not the case. He argued that there are stages, a series of transitions in thinking and action that lead to someone actually changing. He also argued that once their behaviour had changed, it was not a constant state and relapse could occur. Indeed, it could occur at any stage in the process.

The six stages are outlined in Table 7.1. There is also a quote of what someone in that stage might be expected to say.

Stage	Outline of stage	Potential quote
1 Pre-contemplation	This is when the individual will be aware that what they are doing is unhealthy, but they do not feel they need to do anything about it at this point.	'I am OK right now'
2 Contemplation	In this stage individuals show an awareness that they need to take action, but they do not do it. It is often described as a stage of inertia, when people know the right thing to do but they do not act on it.	'I will change, tomorrow'
3 Preparation	This stage is the first point at which action is taken. It is also important in that if the behaviour change is planned, it has a greater chance of succeeding. Behaviours at this stage are dependent on the aspect being changed, but they include things such as ensuring that there are no social events that might tempt a relapse in the early days, planning distractors to keep the individual busy, and deciding on rewards to keep motivation strong.	'I'm changing next month so I need to plan how I will do it'
4 Action	This is when the plan is put into action. Smoking is stopped, alcohol is no longer drunk and this is the first time the person actually makes the change of behaviour. This stage lasts six months until it is deemed to be the next stage of maintenance. Relapse can happen at this stage.	' I have stopped'
5 Maintenance	This stage can be lengthy, and starts to ensure that the initial enthusiasm and motivation do not wane. Maintenance strategies are employed, such as realizing the benefits of adopting the healthier behaviour, rewarding oneself for stopping, and keeping focused on the long-term goal of termination. Relapse can still occur at this stage.	'I have still stopped!'
6 Termination	Termination was added to a revision of the model in 1992. This is a stable state and is the point at which there is no longer any temptation and there is maximum confidence in the ability to resist the behaviour. Some people never achieve this stage, instead staying in the stage of maintenance for many years. However, this stage means the change is complete – relapse cannot occur.	'I will never do it again'

■ **Table 7.1** Prochaska's six stages

The model is used to explain the change of all unhealthy behaviours to healthy ones, including addiction.

The model also outlines what may make the person move on and progress from stage to stage. Variables suggested include self-efficacy (their confidence in their ability), helping relationships at home and in their social support network and reinforcement management (making sure the rewards from healthy behaviours are greater than those from unhealthy behaviours).

Research

■ Smoking cessation programmes based on this theory can be successful. A meta-analysis of five studies by **Velicer *et al.* (2007)** showed that there was a robust 22–26 per cent success rate, which compares favourably with other interventions. The researchers also found no demographic differences in success (gender, age, etc.); therefore, it would suggest that it suits all groups. They did find, however, that success was dependent on the smoking habits (e.g. frequency) of the individual.

■ **Parker & Parikh (2001)** looked at how successful Prochaska's theory was in aiding planning programmes of health care interventions. They found the model performed well and helped facilitate the organizing and planning of successful programmes.

■ A randomized control trial conducted by **Aveyard *et al.* (2009)** found that there was no increase in effectiveness if an intervention was tailored to the stages of change of the individual trying to stop smoking. This clearly contradicts the evidence found by **Velicer *et al.* (2007)**.

Evaluation

■ Evidence on the effectiveness of the model is mixed. This can be seen from the Research section above.

■ **Noel (1999)** developed a modified version of the model, which proposed that behavioural change is not linear and that the stages are more like 'influences'. So anyone going through a process of behaviour change has more or less influence from the stages at any one time. For example, someone may take action for most of the time but also have periods where they are judged to be in the contemplation stage. It seems that the division between the stages may

not be as clear cut as suggested by Prochaska. This idea is further supported in a 2002 review of the model **(Littell & Girvin, 2002)** where the discussion stated that the stages are not exclusive and therefore should not be seen as stages at all.

■ Looking at change as a series of stages means that interventions can be designed to match the stage that the individual is currently in. This is argued to mean that interventions incorporating the model should work better than those that see it in a less dynamic way.

■ The model has led to measures being developed to allow individuals to be classified on which stage they are currently in. Perhaps the one which is the most widely used is URICA (University of Rhode Island Change Assessment scale), which measures the pre-contemplation, contemplation, action and maintenance stages. Adaptations have been made to make the scales more behaviour-specific, depending on which unhealthy behaviour is being changed. This means that there has been a practical application to the theory, and that appropriate interventions can be administered depending on the stage.

Strengthen your learning

1   What is meant by dispositional factors?

2   Explain how the following can affect addiction:
   a genetic vulnerability
   b personality.

3   Summarize what research studies have suggested about how the following can affect addiction:
   a genetic vulnerability
   b personality.

4   What other evaluative points can be made about how the following can affect addiction:
   a genetic vulnerability
   b personality?

5   For Yan *et al.*'s contemporary 2014 study of the relationship between stress, personality, family functioning and internet addiction in college students, in your own words, state the:
   a aims
   b procedure
   c results
   d conclusions
   e evaluative points.

6   Outline:
   a the health belief model
   b the theory of planned behaviour
   c Prochaska's six-stage model of behaviour change.

7   Summarize what research studies have suggested about:
   a the health belief model
   b the theory of planned behaviour
   c Prochaska's six-stage model of behaviour change,

8   Assess the following in terms of their strengths and weaknesses:
   a the health belief model
   b the theory of planned behaviour
   c Prochaska's six-stage model of behaviour change.

■ Risk and protective factors

Risk and protective factors are rather like two sides of the same coin. A risk factor will increase the likelihood of developing a bad health or bad health behaviour, whereas protective factors reduce that risk. Both differ from determining factors in that they can, to some extent, be controlled. Each individual has a combination of both risk and protective factors and the resultant combination can be positive (in that an aspect of bad health is avoided) or negative (in that they become more likely to develop bad health if the risks outweigh the protective factors).

The 'In the News' feature opposite illustrates ways that an individual can be at greater risk of suicide owing to family influences and stress, both of which are discussed as risk factors below. They also act as protective factors in other contexts. Some family influence is positive and there is reduced pressure to do well, so stress levels are low.

IN THE NEWS

Ψ The Psychological Enquirer

THE SILICON VALLEY SUICIDES

Palo Alto in California is the location of multi-national companies such as Facebook and Google. The families living there are often affluent and it is not unusual for Chinese families to settle in the area temporarily so that the children can access the education provided at the local high schools. These high schools have a phenomenally successful academic track record, and a higher than average percentage of its senior students getting into top universities after graduation. However, the schools in the area also unfortunately have experienced a higher than average number of its students committing suicide: five times higher than the national average.

Many questions have been raised about why this occurs. The area is affluent (double the median in California) and the students too have much of what they need in terms of cars, phones, and so on. However, they do report that the levels of stress that the culture of achievement places them under means they do not feel the benefits of wealth. There is an expectation of high achievement within much of the community and students often have a phenomenal amount of time at extracurricular activities. All of which contribute to a pressured environment.

■ **Figure 7.3** It has been suggested that stress may have played a part in the high level of student suicides in Silicon Valley

After the suicide of a student called Cameron Lee who, to parents and peers, appeared happy and well, a fellow student called Martha Cabot uploaded a YouTube video, which urged a change in attitude. She focused upon the parents and the stress they exert. The following are quotes from the video. She says:

'We love our Moms and we love our Dads but calm down.'

'The amount of stress on a student is ridiculous. Students feel the constant need at our school of having to keep up with all the achievements.'

'We'll do just fine, even though we got a B minus on that chem test. And no, I won't join the debate team for you.'

She does acknowledge in the information under the video that 'stress' is not definitively the cause of the suicides. However, there does appear to be a relationship in terms of poor health with students in this position. There is also an increase in unhealthy behaviours such as alcohol and drug abuse. **Luthar & Latendresse (2005)** talk about a u-shaped curve, in terms of poor health and unhealthy behaviours, where it is the most-rich and the most-poor students who display a link to poor health (drug abuse, anxiety and depression).

This illustrates that influences from the environment can act as risk factors for an individual, increasing unhealthy behaviour and poor mental health.

Risk and protective factors for health can occur at the biological, psychological and social levels and they are defined as being risk/protective factors because of exposure to them in the environment. For this section, we will consider factors influencing the development of an addiction at all three levels. Biological factors are strictly dispositional factors as they are internal factors that affect health, but there are biological reactions to psychological or cognitive risk factors such as stress. For risk and protective factors, there are both cognitive and social factors. At the cognitive level, we will look at the influence of stress. Finally, at the social level we will consider family influences, specifically social learning and peer influence.

Stress

It is easy to see why high levels of stress would make you more vulnerable to addiction. Turning to behaviours and drugs that give a temporary relief from stress is a type of coping mechanism. Stress can be short term or long term and it is the long-term exposure to stress that could increase the likelihood of someone becoming addicted. High stress in this instance is a risk factor, low stress a protective factor.

There would be mediating factors, however, so someone might experience high stress, but have a lot of social support and other ways of coping with it. It is possible that it is not the level of stress, but the ability to cope with it that predisposes   someone to addiction.

There are higher levels of stress in cities or areas with a high population, and this is also related to addictive behaviour as the number of addicts is greater in overcrowded urban environments. However, cause and effect cannot be established as this is a correlation. The relationship is complex and it could be that addicts live in those areas because of the availability of drugs or cheaper living costs.

There is also the possibility that the two are related because addiction prompts high levels of stress owing to the problems it causes with money.

LINK TO THE BIOLOGICAL EXPLANATION

Stress is a cognitive state as the individual has to perceive a situation as stressful. However, there is a biological effect from the reaction of the body in terms of raised heart rate and sweating. This indicates that there are multiple biological effects occurring in response to a stressor.

◾ Research

- **Yan *et al.* (2014)** (see 'Contemporary research' on page 311) show that there is a link between stress and addiction. The measure used was life changes which are linked to stress. However, it could be argued that the measure may lack validity.

- **Tavolacci *et al.* (2013)** examined the risk factors in developing addiction at university. Their argument was that it was a stressful time and that this predisposed students to addictive disorders. They compared highly stressed students (using a perceived stress scale) with students who were feeling less stressed and found that high perception of stress was related to smoking regularly, alcohol abuse problems and risk of cyber addiction (addiction to the internet). This suggests that stress and vulnerability to addiction are linked, although a cause-and-effect relationship cannot be established through this research as it is correlational.

■ **Figure 7.4** Studies have found that addiction to the internet can be related to high perception of stress
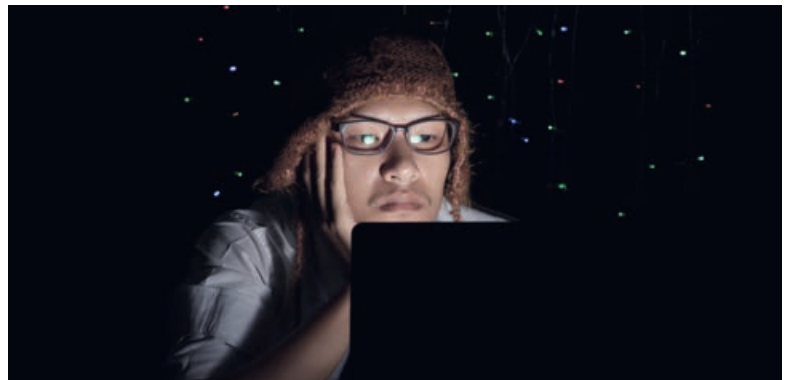
- **Sinha (2001)** found in a review of research that stress plays an important role in perpetuating drug abuse and relapse. The mechanism was not made clear from the research, and ideas about how this happened could merely be suggested. This demonstrates a link between stress and addiction, but also that more research into the possible mechanism is necessary.

- **Piazza *et al.* (1989)** tested rats for vulnerability to addiction through stress. They achieved a state of stress in the rats by pinching their tails and found that rats were more likely to seek out and ingest amphetamines the more stressed they became. This research too indicates a relationship between stress and addiction, but as the research is conducted on animals there are issues with generalizing the findings to human behaviour. There is also no insight on why there is a relationship in terms of thought processes or biological mechanisms.

PSYCHOLOGY IN THE REAL WORLD

Screening the older generation for addiction: November 2014

A nursing home in the Bronx, New York has decided that its residents need to be screened for addiction as they have noted that they are vulnerable at key times. One such potential time seems to occur when they are administered strong pain killers to reduce discomfort following surgery. The nursing home targets recent patients who have had surgery for joint replacements or heart conditions. Other occasions when the nursing home believes residents are vulnerable is when they have had a recent bereavement, or life change such as retirement.

The residents are screened as part of their care programme, and if issues with addiction are picked up, they are offered help for their addiction.

Risk factors were clearly identified in this example and appropriate preventative measures were put in place to try and ensure that the vulnerability to addiction did not manifest into actual addiction.

Evaluation

- There is an issue with establishing cause and effect through research. High stress levels may indeed be linked to the likelihood of becoming addicted, but they could equally be a by-product of being addicted.

- Stress research is often conducted on animals because of the ethical issues of using humans. This means that there are issues with applying the research to human behaviour. There is no way of knowing, for example, how stressed the animal feels or indeed if they are definitely stressed, so it can be argued that there are issues with validity.

- Research in this field is useful in terms of developing a practical application. It is feasible that a vulnerability measure could be developed to help predict the likelihood of becoming addicted due to stress levels. A stress level could also be used to help predict the likelihood that someone might relapse, as relapses and stress levels are closely linked.

Family influences

There are two key ways that families can influence addictive behaviour: social learning and expectancies. They can either put an individual at risk of addiction, or protect them to some extent from developing addictive behaviour.

Social learning is the learning of behaviour by observation of role models in the environment. If the individual sees that model rewarded for their behaviour then the vicarious reinforcement is going to increase the likelihood of the observer imitating the behaviour. It is clear how that could occur with addictive substances within a family. However, it should be noted that the addiction is not the imitated behaviour; it is the desire to try the substance that is the influence.

LINK TO SOCIOCULTURAL LEVEL OF ANALYSIS

Social learning is a sociocultural explanation for why someone is more or less likely to develop an addiction. There are elements of cognitive processing, such as the level of motivation, but on the whole it is social cognitive and therefore fits within the category of sociocultural explanations.

■ Research

- **Akers & Lee (1996)** found that the social learning process was important in explaining smoking behaviours in adolescents. They looked over five years at the smoking levels of 454 young adults aged 12 to 17 and found that social influences affected the smoking behaviours of these participants, to try smoking, continue smoking or quit smoking. One of the sources of social learning tested was family influences.
- **Yan *et al.* (2014)** (see 'Contemporary research' on page 311) show that there is a relationship between the cohesiveness of the family and the likelihood of internet addiction.

■ Evaluation

- The relative influence of the family will vary dependent on the age and the strength of relationship for an individual. It may be that at a younger age the influence of the family to try, or abstain from, a substance or behaviour could be much greater than in an older individual. Therefore, family influence is not constant throughout the lifespan.
- There is not a certainty that if a child observes a behaviour they will definitely imitate that behaviour. There are mediating cognitive processes that influence whether a behaviour is imitated or not. This means that motivations to behave in a certain way, such as start smoking, are influenced by other sources which may counteract the family influence. For example, seeing a parent smoke is in no way a guarantee that the children will smoke too.
- It is very difficult to gauge the relative influence of the family against all the other potential influences. All that can be said is that the family can influence behaviour and the likelihood to use a substance. However, how that influence compares with peer influence, for example, is difficult to ascertain

Peers

Given that social influence is often seen as the psychological explanation for initiation to addictive behaviours, the influence of peers is potentially great. However, as with many of the vulnerability factors, proving causation is problematic. It is just as possible that choice of peer groups is influenced by addiction. So an addict might choose a peer group that allows them easy access to the focus of the addiction (e.g. drug) and they may choose a non-judgemental peer group.

Peers are influential at the intervention stage, too, as they can provide access to drugs and may encourage a relapse. It is argued that these social influences should be taken into account when designing and delivering an intervention programme to try to ensure maximum success levels.

■ Research

- In a longitudinal study by **Bullers *et al.* (2001)** it was found that selection of the peer group followed addiction in many cases and that it was the greatest influential direction. Social influence had less of an effect. This indicates that the peer group you are part of may not be a strong risk factor.
- **Leshner (1998)** believes treatment strategies must include social context elements, such as peer groups, as well as biological and behavioural ones if they are to be successful, as recovered addicts may relapse when leaving a clinic due to the original social context still being in place. Peer groups can therefore be helpful or unhelpful in helping some recover from addiction.
- **Bauman & Ennett (1996)** argued that much research states that peer influence is a reason behind substance abuse. However, upon reviewing the literature they found that often it was not tested as a construct and that it is possible that the influence level is overestimated.
- Work by **Kobus (2003)** suggested, through reviewing the literature, that the effect of peer influence on smoking behaviour was more subtle than often thought and that the media, family and neighbourhood were also involved. They agreed with the idea of peer influence

for both encouraging and deterring smoking, but argued that the psychological processes behind the behaviour needed more research as they may be more influential risk factors than peer influence per se.

■ Evaluation

- Peer group influences are just one of many social context effects. Others include such factors as economic and social deprivation, and all should be considered when assessing levels of vulnerability to dependency, as dependency is rarely related to just one factor.
- It is difficult to ascertain the level of influence from peers. Distinguishing the influence of friends from that of family is impossible and therefore it is difficult to establish exactly the extent to which someone is influenced by their peers.
- The influence of peers is likely to be greater at different ages. The work of **Harris (1998)** states that peer influence increases during adolescence, so substance abuse in young adults is likely to be influenced by peers to a greater extent than parents.

Strengthen your learning

1 What is meant by:
   a risk
   b protective factors?

2 Explain how stress can affect vulnerability to addiction.

3 Summarize what research studies have suggested about how stress can affect vulnerability to addiction.

4 What other evaluative points can be made about how stress can affect vulnerability to addiction?

5 Explain how family influences can affect vulnerability to addiction.

6 Summarize what research studies have suggested about how family influences can affect vulnerability to addiction.

7 What other evaluative points can be made about how family influences can affect vulnerability to addiction?

8 Explain how peers can affect vulnerability to addiction.

9 Summarize what research studies have suggested about how peers can affect vulnerability to addiction.

10 What other evaluative points can be made about how peers can affect vulnerability to addiction?

SECTION SUMMARY

- The biopsychosocial model of health behaviour is an integrative model which considers biological, psychological and sociocultural elements of health.
- Dispositional factors such as genetic vulnerability and personality are implicated in health behaviour.
- Health beliefs described by the health belief model, the theory of planned behaviour and Prochaska's six-stage model demonstrate how thought processes can affect health.
- Risk and protective factors such as stress, expectancies, family and peer influences all play a part in affecting the likelihood of suffering ill health.

■ Assessment check

1	Evaluate the biopsychosocial model of health and well-being.	(22 marks)
2	Discuss research studies related to the biopsychosocial model of health.	(22 marks)
3	Discuss the influence of dispositional factors on health-related behaviour.	(22 marks)
4	Evaluate health beliefs as determinants of health.	(22 marks)
5	Discuss one or more research studies of determinants of health.	(22 marks)
6	Discuss risk and protective factors as determinants of health.	(22 marks)

Health problems

'Health is the greatest possession. Contentment is the greatest
treasure. Confidence is the greatest friend.'
Lao Tzu

'Addiction isn't about substance – you aren't addicted to the substance,
you are addicted to the alteration of mood that the substance brings.'
Susan Cheever

◼ Explanations of health problems

The first three chapters of this book considered three levels of explanation in psychology: biological, cognitive and sociocultural. These three overarching ways can be used to explain a specific behaviour such as addiction. The following section looks at the three ways these perspectives explain addiction behaviour, specifically smoking addiction.

> **FOCUS ON…**
>
> ◼ How health problems can be explained. Ensure you pay equal attention to all three levels of explanation.
> ◼ The prevalence of health problems in the population and the issues with calculating incidence problems.

Brain neurochemistry: the role of dopamine

Dopamine is implicated in addiction as the addictive substance or behaviour prompts a high through boosting the activity of the brain's reward system. This system is found in the centre of the brain and is a complex circuit of neurons that produces a high, like euphoria, which means the individual is tempted to take the drug again or repeat the behaviour.

The brain mechanism is basically a pathway of neurons that is activated by the neurotransmitter dopamine. The source of the activation is the ventral tegmental area (VTA), which has many dopamine neurons. This then triggers activation in the limbic system (specifically the nucleus accumbens) and this subsequently boosts activity in the prefrontal cortex.

This activity is called the 'common reward pathway', as it is associated with the feeling of euphoria. As the level of emotion experienced by this pathway is so high, it explains how an addiction can be formed through repetitive behaviour. As time goes on, and through repeated usage, the level of drug needed to elicit the reaction becomes greater. This occurs due to a change in the neuronal structure in the pathway, which accounts for tolerance levels increasing in an individual and also why the individual craves the drug or wishes to carry out the behaviour. Addiction is the result.

> **LINK TO BIOLOGICAL EXPLANATION**
>
> The dopamine hypothesis is a biological explanation for addiction because it focuses on brain physiology and biochemicals.

◼ Research

- **Dani & Biasi (2001)** found that part of the reason nicotine is so addictive is because it acts upon the dopaminergic systems, which helps to reinforce rewarding behaviour. This shows a direct relationship between the neural mechanisms in the brain and the rewarding effects felt while smoking.
- **Watkins *et al.* (2000)** reviewed the research into the neurobiology of nicotine addiction. They found that dopamine release was reduced following chronic exposure to nicotine. This means that tolerance of the drug occurs owing to the level of reward felt decreasing.

- **Di Chiara (2000)** argues that dopamine is one of the main causes for the addictive nature of nicotine. The rewarding aspect of the drug such as the feeling of pleasure is released through dopaminergic activity so is responsible for the addictive nature of the drug. If pleasure was not felt then the smoker would not continue to smoke over time.

Evaluation

- The researchers argue that this is only part of the neural action and that dopamine is not the whole story. It is likely that the reason why nicotine is so addictive is due to several complex explanations.

- The role of dopamine could explain how there appears to be a genetic link to addiction. It is possible that the dopaminergic mechanism in some individuals leads them to feel the rewarding aspects of drugs to a greater level.

- The evidence base for research in this area is often using animals as a sample. This means the findings may not be generalizable to humans. They also potentially lack validity because the feelings associated with addiction and drug use cannot be measured successfully because of a lack of communication.

- The dopamine explanation for addiction is purely biological and, as a consequence, the psychological aspects of addiction are largely ignored. It is likely that dopamine, although implicated, is not the whole picture, and many levels of explanation should be considered. It can therefore be said to be reductionist.

Cognitive explanation of smoking addiction

Expectancies

Expectancies are the associations we make from observing the environment around us. In other words, we may learn from our environment that if we drink a lot of alcohol then we will get ill (because we witnessed our older brother doing this). Another application is that if we smoke cigarettes then we will appear cool (because we saw a rock star doing this).

These expectancies are formed from our learning and experience, which in turn is often our home environment. They are a form of schema. This then can explain to some extent how our family and others in our environment can influence our likelihood of addiction. It can increase or decrease the likelihood of trying substances or behaviours and, as a consequence, can influence our chance of becoming addicted.

> **LINK TO COGNITIVE EXPLANATION**
>
> As expectancies are formed through schemas they are a cognitive construct. They are formed through experience but can influence the likelihood of getting addicted, maybe through faulty schemas giving an inaccurate expectancy of becoming addicted to any given substance.

Research

- **Christiansen *et al.* (1989)** have shown that the expectancies of adolescents can be used to predict drinking problems in later life. When sampling a group of 11- to 14-year-olds they found that the amount and how often they drank a year later was linked to their expectancies and beliefs. This research shows the importance of environmental influence on later behaviour, so the influence of the family is potentially significant.

- **Dunn & Goldman (1998)** found that when they measured the expectancies of 7- to 18-year-olds they mirrored those of adults. This suggests that the adults in a child's environment can heavily influence their attitude towards substance use and therefore potentially addiction.

- **Brown *et al.* (1998)** examined the way that expectancies can affect treatment for addiction. They found that addicts who had underestimated the effects of withdrawal (low expectancy) were less likely to recover from addiction. This suggests that expectancies are important in recovering from addiction, but lower expectancies may also mean that the addiction is more likely to occur in the first place.

■ Evaluation

■ Schemas are powerful influences on behaviour and are formed through experience. However, the extent to which they are influential in behaviour is difficult to gauge precisely. It seems likely that they are a key influence but are only part of the picture.

■ Peer influence also helps to form expectancies, as they can alter the schema for social situations where the initial contact with a drug occurs. For this reason, it is likely that peers are more likely than families to help the formation of schemas and their assimilation by an individual.

Sociocultural explanation of smoking addiction

Sociocultural explanations for addiction look to the environment to explain why someone becomes addicted to a substance or behaviour. This chapter has previously looked at how addiction could be more likely to occur in terms of the environment; namely through family and peer influence. However, it can also explain how the behaviour occurs in the first place and then becomes addictive behaviour. The most widely acknowledged environmental influence to developing addiction is explained using learning theories, specifically social learning, and operant and classical conditioning. This will be examined in the following section, referring specifically to smoking behaviour.

Learning theory as applied to smoking behaviour

> **Operant conditioning (OC)** – learning due to the positive or negative consequences of the behaviour.

Smoking behaviour is well explained by learning theory as a two-stage process involving social learning theory and **operant conditioning (OC)**.

Social learning theory

The basic assumptions of social learning explanations for behaviour are that behaviour is learned from the environment and this occurs when an individual observes others and takes note of the reinforcement or punishment they receive. More detail on social learning theory (SLT) can be seen in the section headed 'Social cognitive theory' in Chapter 3 on page 109.

Social learning provides a sound explanation for how someone starts smoking. An individual observes role models smoking and experiences the vicarious reinforcement of social learning. Vicarious reinforcement is seeing someone else receiving a reward. This process is especially powerful in young people and this is also when most first experience smoking. Initiation of smoking is therefore well explained by peer pressure and social influences.

Operant conditioning (behaviourist explanation)

Operant conditioning is another learning principle of the behaviourist approach. It works on the principle of learning by consequence. There are three key ways this can occur: positive reinforcement, negative reinforcement and punishment.

In general terms these three principles can make behaviour more or less likely. If you apply this to a school-based example of whether to complete a piece of homework or not, you would find that the:

1 Positive reinforcement would be potential better grades, teacher approval and praise.
2 Negative reinforcement would be avoiding disapproval from teachers and parents, avoiding a detention, teacher's anger.

   Both of these would be more likely to make you do the work.

3 However, punishment for not completing homework would be the disapproval from teachers and parents, detention and the teacher's anger.

   This makes NOT doing the homework less likely.

If you apply these principles to smoking, that is, whether to have a cigarette or not, you would find examples of positive reinforcement such as potentially feeling calmer and the negative reinforcement of smoking would be avoiding the bad feelings of withdrawal to nicotine. Both of these would be more likely to make you smoke.

OC explains why smoking continues and is due to the positive reinforcement that nicotine induces. It can give a pleasant feeling that is rewarding for the individual. The Law of Effect makes it more likely to keep reoccurring as positive reinforcement is involved.

Cue reactivity (behaviourist explanation using classical conditioning)

Cue reactivity with regard to smoking behaviour involves associations made through **classical conditioning (CC)**. The key idea is that learning occurs through classical conditioning when an association is made between a previously neutral stimulus and reflex response. This reflex response can be positive or negative. If the association of the stimulus is with a positive feeling, then that positive feeling will arise whenever the person comes into contact with that specific stimulus. The same is true for negative associations.

Cues in the environment, such as someone sitting outside the pub on a summer's evening with a pint of beer in one hand and a cigarette in the other, for example, might cause an association to form between the pint of beer and the need for a cigarette. This means that the two go together and it is strange for the person not to smoke while drinking alcohol. In classical conditioning terms, the pint glass serves as a conditioned stimulus to cue the craving for a cigarette. This association makes giving up hard in certain environments and makes someone more likely to smoke, perpetuating the addiction.

> **Classical conditioning (CC)** – an association between a previously neutral object/ situation (stimulus) and a strong emotional response.

◼ Research

- **Brynner (1969)** found that media images of smoking create perceptions of it being attractive and tough. This increases the motivation for wanting to smoke, and if role models are smoking in the media, they could provide models for social learning in the audience. This lends support to SLT being implicated in smoking.

- The US National Institute on Drug Abuse (NIDA) found that 90 per cent of US smokers started smoking as adolescents, which was attributed mainly to observing and imitating peers (**Weitzman & Ying-Yeh Chen, 2005**). This suggests that the decision to start smoking is due in part to social learning factors.

- In research with monkeys, **Goldberg *et al.* (1981)** used a system where the monkeys had to press a lever to receive nicotine. The researchers found that the monkeys pressed the lever at a rate that was similar to the level that would be expected with cocaine. This suggests addictive behaviour and the idea that it is accessed for its reinforcing effect. Operant conditioning as an explanation for addiction therefore has research support.

- **Calvert *et al.* (2010)** reports that smokers shown cigarette packets experienced strong activation in the ventral striatum and nucleus accumbens brain areas, suggesting a biological explanation of craving behaviour. However, this also supports the idea of cue reactivity and the brain activation may show the neural basis for classical conditioning.

◼ Evaluation

- There is sound research support for learning theory as an explanation for addiction. However, it seems that only looking to operant conditioning, for example, is reductionist and more specifically an example of stimulus-response reductionism. Reductionism in this sense means lacking detail or oversimplified. There are many other factors involved in the behaviour.

- Learning theory cannot explain why one person may smoke for a short amount of time and not become addicted to the nicotine, whereas another may be addicted. If learning theory is to be believed then any behaviour that is rewarded will be repeated. This is clearly not the case, so the theory is flawed when considering individual differences.

- Operant conditioning cannot easily explain why someone would initially start smoking but can explain why they might get addicted to it. Social learning is able to explain the initial behaviour, so perhaps a more convincing explanation would be to combine the two learning explanations.

Strengthen your learning

1 Explain the role of dopamine in addiction.

2 Summarize what research studies have suggested about the role of dopamine in addiction.

3 What other evaluative points can be made about the role of dopamine in addiction?

4 Outline the cognitive explanation of addiction to smoking, including reference to expectancies.

5 Summarize what research studies have suggested about the cognitive explanation of addiction to smoking.

6 Assess the cognitive explanation of addiction to smoking in terms of its strengths and weaknesses.

7 Outline the sociocultural explanation of addiction to smoking.

8 Summarize what research studies have suggested about the sociocultural explanation of addiction to smoking.

9 Assess the sociocultural explanation of addiction to smoking in terms of its strengths and weaknesses.

10 Outline the learning theory explanation of addiction to smoking, including reference to social learning theory, operant conditioning and cue reactivity (classical conditioning).

11 Summarize what research studies have suggested about the learning theory explanation of addiction to smoking.

12 Assess the learning theory explanation of addiction to smoking in terms of strengths and weaknesses.

Prevalence rates of health problems

A key consideration when examining health problems is the prevalence of the problem within the population. Prevalence is the word used to describe the rate of occurrence of a health problem. Knowledge of how widespread a problem is helps to inform priorities in terms of resources but, arguably more importantly, it can raise awareness about a health problem. Prevalence statistics are often a powerful tool in health promotion campaigns.

An example of reported prevalence rates is the figures reported in DSM-V, the diagnostic and statistical manual. For example, for addictive behaviour, these are divided up into the specific substances or behaviours that the addiction is linked to.

Alcohol addiction (or alcohol use disorder) is described as a common disorder in the diagnostic manual. Figures from the United States are reported stating the following information:

■ Rates of the disorder indicate that more adult men (12.4 per cent) than adult women (4.9 per cent) are diagnosed.

■ There is a reduction in long-term (i.e. more than a year) incidence in middle age, with the highest incidence rate occurring in the 18 to 29 years old age group.

The reported prevalence statistics for *gambling disorder* are lower:

■ The rates reported in the DSM-V (2013) show an incidence rate of 0.2 to 0.3 per cent in the general population.

■ The lifetime prevalence rate is 0.4 to 1 per cent.

■ For women (0.2 per cent) there is a lower lifetime prevalence rate compared to men (0.6 per cent).

These are reported from diagnosis rates and this is problematic for many reasons. The evaluation section below outlines why the figures could be inaccurate for prevalence figures in all disorders.

Research

■ The relation between awareness of the symptoms of high blood pressure and prevalence rates was highlighted in work conducted by **Wu *et al.* (2008)**. They looked at the prevalence within the population in China and the awareness levels, finding that the two were closely linked. This illustrates that there is a relationship between both prevalence and awareness.

- **Keyes *et al.* (2010)** examined the effect of stigma on treatment being sought by those suffering from alcohol disorders. They found that the level of stigma perceived by the individuals mediated their willingness to access treatment centres. This could mean that prevalence rates reported will be lower than the actual number in the population.
- **Hoffman & Kopak (2015)** compared the criteria for diagnosis of alcohol use disorders (AUDs) between DSM-V and ICD-10. Severe cases would be diagnosed by practitioners using either manual; however, this was not the case with less severe cases. They found the criteria differ in the two manuals in terms of both the mild and moderate cases. This clearly will affect global prevalence figures reported.

■ Evaluation of the accuracy of prevalence rates

There is a key relationship between prevalence and awareness. The more widespread a problem is, the more likely people are to be aware of it. However, this relationship can work the other way. Prevalence rates can increase due to awareness both within the general and practitioner population. It is for this reason that prevalence rates cannot be entirely accurate for some health problems.

There is also a key relationship between diagnosis and prevalence, as ultimately, a case will not be counted within prevalence figures if not diagnosed formally. There is an issue with individuals seeking help in some cases owing to stigma. There can be a worry that some health problems, if diagnosed, are not viewed sympathetically by society. This was the case for mental health problems within many cultures and is still the case in some areas of the world today. In the example of addiction prevalence statistics, the individual with the addiction knows that acknowledging the problem and seeking help would mean a period of withdrawal from the substance or behaviour. This is unthinkable for some individuals who are addicted and they will therefore refuse to seek diagnosis and help.

Issues with diagnosis also mean that global prevalence figures are problematic. Diagnosis varies from country to country and the priorities within a country's health system will affect the likelihood of diagnosis. The criteria for diagnosis vary from country to country and therefore when comparing prevalence rates globally, the statistics are not always as directly comparable as they might seem to be. For example, the two key diagnostic manuals for mental health disorders (DSM-V and ICD-10) used currently are referred to across the world, with some countries favouring one manual over the other. Their criteria for diagnosis vary, meaning that diagnosis for the same disorder could differ depending on the manual used.

For prevalence rates to be accurate it is important that diagnosis is correct and standardized. If this is not the case then the statistics compiled will not compare like with like. Diagnostic manuals are designed to help standardize the diagnosis of physical and mental problems. For mental disorder, even though a symptomatology is described from diagnosis there is room for individual difference. This makes diagnosis subjective. For example, in DSM-V the first diagnostic criterion for major depressive disorder is stated as: 'Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g. feels sad, empty, hopeless) or observation made by others (e.g. appears tearful).' Looking at this wording it seems that diagnosis is made on judgement of either the individual being diagnosed, or those around them. Both judgements are opinion-based and therefore potentially unreliable.

Prevalence rates are also weakened by the samples that provide the statistics. These can be self-selecting. If medical diagnosis is the source of the information then, even with its associated problems of reliability, all the statistics can be derived from official records. This is not always where prevalence records come from. If taken from survey samples the respondents are self-selecting. This means potentially that very busy people will not respond, or those who struggle with literacy will not want to complete a survey. Given the notoriously slow response rate for questionnaires and surveys generally, the prevalence rates derived from such means are likely to be inaccurate.

KEY STUDY	**CONTEMPORARY RESEARCH**

'A case study of mental health prevalence statistics'
McManus *et al.* (2016)

The following research is a report compiled for the UK government on the prevalence of mental health issues.

Aim

The report was designed to give information on how common mental health problems are in England and also gathered data on the services treating mental health problems.

Procedure

The data was gathered in 2014 using the Adult Psychiatric Morbidity Survey, which gives information on both treated and untreated psychiatric disorder. As this is the third of such surveys, the research methods have become standardized so that prevalence rates can be compared.

Results

Statistics documented by the report showed that:

1   One in six people experienced a common mental disorder (e.g. depression or anxiety) in the last week.
2   Common mental disorders (such as depression or anxiety) are more common among women than among men. This gender difference is most pronounced among those aged 16 to 24.
3   The percentage of people reporting a common mental disorder has risen since 1993. The figure was 15.5 per cent in 1993 but had risen to 18.9 per cent in 2014.
4   Unemployed and economically inactive people are more likely to report common mental disorders.

Conclusions

Mental health problems are on the increase in the general population and there are groups with higher numbers reported.

Evaluation

The strengths of the research as given by the researchers were as follows:

1   The sample came from the general population rather than patient lists, which gives a fuller picture of the prevalence, as it includes people who have not yet accessed treatment.
2   The survey used validated screeners and assessments for collecting the data, which provided information on people who might not yet be diagnosed.
3   The survey collects more data, including demographic data, on each individual so the data has depth.
4   There was permission sought for collecting more data later so there is an opportunity for longitudinal data on individuals.

However, the researchers did acknowledge limitations in the data:

1   The sample is limited to private households only. This means that it is a biased sample, which will not collect data from all demographic groups in the general population. Indeed, some of those not included, such as the homeless, are known to suffer a higher percentage of mental health problems. However, the percentage of people omitted was argued to be very small and therefore the statistics would not be significantly different anyway.

2 The response rate was 57 per cent. This means that some of the people contacted did not take part, either because the communication did not reach them, or they refused to take part. This means that the sample is self-selected and could be biased. The researchers introduced a weighting system that addressed this issue to some extent.

3 Questionnaires and measures were used online, but it is possible that clinical interviews would have been more reliable had they been carried out by a mental health professional.

4 The sensitive nature of the topics may mean that the accuracy of the data could be compromised. Although the sensitive data is collected online, there still could be an issue with honesty with questions being so personal. Prevalence rates could therefore be underreported.

5 It should be recognized that the prevalence figures can only ever be estimates of the general population. They could be higher, or lower, than the actual figure.

YOU ARE THE RESEARCHER

Reports state that the number of mental health problems in secondary age students is increasing. You have been commissioned by the National Health Service to examine this worrying increase.

How could you design a study to investigate the potential reason behind this increase? Justify your choice of methodology.

Strengthen your learning

1 What is meant by prevalence rates of health problems?

2 What are the prevalence rates for:
   a alcohol
   b gambling addiction?

3 Summarize what research studies have suggested about prevalence rates for addiction.

4 From McManus *et al.*'s contemporary 2016 study of mental health prevalence statistics, in your own words, state the:
   a aims
   b procedure
   c results
   d conclusions
   e evaluative points.

SECTION SUMMARY

- Explanations of health problems can include differing levels of explanations, such as biological, cognitive and sociocultural explanations.
- The biological explanation for addiction is the role of dopamine, a neurotransmitter.
- The cognitive explanation for addiction is expectancies based on schemas gathered through experience.
- The sociocultural explanation for addiction is learning theory, specifically operant and classical conditioning (cue reactivity).
- Prevalence rates of health problems are indications of the incidence rate in the population.
- There are problems with compiling accurate prevalence rates, as issues with diagnosis and sample bias skew statistics.

■ Assessment check

1	Contrast explanations of health problems.	(22 marks)
2	Discuss research studies related to one or more explanations of health problems.	(22 marks)
3	Discuss one explanation of health problems.	(22 marks)
4	Discuss prevalence rates of health problems.	(22 marks)
5	Evaluate research studies related to prevalence rates of health problems.	(22 marks)
6	With the use of suitable examples discuss ethical considerations of research into health problems.	(22 marks)

Promoting health

'Smoking is a custom, loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs …'
King James 1, in what is argued to be the first health promotion statement (transcribed by Jones, 1985: 1763)

Health promotion is communication with targeted groups or the general public to encourage good health behaviours. They use all communication mediums and we will all have been the recipient of health promotions communication at one time or another.

FOCUS ON…

- Health promotion approaches and how effective they are.
- Health promotion tools and their effectiveness.
- How effective health promotion programmes are and how they are evaluated.

As the models of health have changed through time so too has health promotion. The medical model concentrated on specific interventions with a heavy use of trained medical staff, but as health came to be seen holistically, the emphasis moved to informing the individual. There has also been a move to encompass consideration of complementary and alternative therapies as the influence of the medical model has diminished.

Alongside the medical model, health promotion has embraced the idea of environmental and social influences on health, such as peer influence and poverty.

In an attempt to encourage good health globally, the World Health Organization has defined five key principles to outline the areas that health promotion should consider:

1 The general population as a whole should be considered for health promotion, not just specific target groups who could contract specific diseases.

2 The promotion should be focused on the cause of the health problem, including the individual's environment.

3 Health promotion should be a combination of complementary methods and a variety of communication mediums should be used.

4 Promotion should try to include public participation and encourage the formation of self-help groups.

5 Health professionals should be consulted and involved in health promotions.

These principles clearly acknowledge the role of the health professional, the individual and the social and environmental factors in the good health of the global population.

■ The approaches of health promotion

Marks & Allegrante (2005) classified the ways of tackling health promotion into three categories: the self-empowerment approach, the behaviour change approach, and lastly the community development approach.

Self-empowerment approach

This approach focuses on the control of the individual over their body and environment. It is likely that adherence to the programme and thus its success will be increased if the individual affected feels they have some control over the outcome, which means they will also be more likely to do something about their health. This means taking a less prescriptive approach and encouraging individuals to take lifestyle choices that will impact on their general health.

A good example of such an approach is the 'This Girl Can' campaign, which aims to address the issue of low sports participation numbers in women. Fear of judgement was identified as a barrier to women taking part in sport, owing to being concerned about their appearance, thinking they are not good at sport and prioritizing others over themselves. The campaign was designed to address those fears in women directly and it used a film of real women exercising, together with slogans such as 'sweating like a pig', 'feeling like a fox', 'I jiggle therefore I am' and 'I kick balls, deal with it'.

■ **Figure 7.5** This Girl Can campaign

The campaign, which resulted in 1.6 million women starting to exercise, is ongoing.

Community development approach

The community development approach is just that: health promotion within the community so that the environment of the individual changes and social support is available. Self-help groups are an example of this kind of health promotion.

In Beijing, China there is a landmark known as the Temple of Heaven. Every morning large numbers of retired people gather in the grounds to do some form of activity together in groups. Tai chi, choirs and line dancing, among other activities, are on offer. It is apparent to visitors that there is a strong sense of community and support. It promotes activity and companionship, which supports good health.

■ **Figure 7.6** The Temple of Heaven gardens in China, where retired people gather in the morning to do activities together

---

LINK TO THE SOCIOCULTURAL EXPLANATION

The community development approach to health depends on changing the environment so that it is encouraging of good health behaviours. It is therefore a sociocultural approach to health promotion.

Behaviour change approach

This approach to health promotion focuses on the cognitive level. People hold beliefs that are not realistic. These are particularly damaging from a health perspective, where faulty thinking causes an individual to feel they are not at risk of poor health or a specific disease. A public health campaign can address that misperception by presenting facts and highlighting who might be at risk. There are ways of doing this.

For example, message content has been shown to be more effective if both sides of the argument are given. The individual receiving the message retains an element of control, which makes it more attractive.

Another way is to present information including statistics that can be perceived in several ways by an individual; so if, for example, you say the risk of a disease is a 10 per cent, this can be seen either as risky or minimal depending on the context.

Health promotion campaigns using this approach are designed to change the individual's way of thinking about their health. This can be done in a variety of different ways, for example by giving facts and the reality of the situation so that they do not hold misperceptions that they are not affected.

An example of this approach was the one taken to challenge the idea that heart disease only affected men. It was designed by the British Heart Foundation and involved erecting temporary cardboard gravestones in five UK cities. The gravestones had words such as 'Mum' and 'Grandma' written on them to raise awareness of potential female fatalities from heart-disease-related problems. This campaign also aimed to raise money, which it did, over £1 million.

The AIDS campaign of the 1980s also used shock images to raise awareness of the condition. At that point there was no known treatment, so the diagnosis was a death sentence. Prior to the campaign the disease was seen as affecting homosexuals, so the government wanted to address that misperception. The campaign image was striking in that it emphasized the terminal prognosis for that time, with gravestones, flowers and black and white images.

LINK TO THE COGNITIVE EXPLANATION

The self-empowerment and behaviour change approaches are cognitive as they are designed to change the thinking of the target population. By affecting how individuals feel about themselves and how they think about the health risk or behaviour, the campaign approach should encourage them to make behavioural changes.

KEY STUDY

CONTEMPORARY RESEARCH

'When scary messages backfire: Influence of dispositional cognitive avoidance on the effectiveness of threat communications'
Nestler & Egloff (2010)

Sometimes a health promotion campaign does not get the desired results. This can be due to unpredicted reactions by the general public.

Aim

This research was conducted to identify when a health promotion message does not work in the way that is expected, and why.

Procedure

1   Nestler & Egloff looked at the reactions of participants to two health messages, one a very 'high threat' communication, the other low threat. It was thought that the high-threat communication would prompt healthier choices, as people would be scared about the consequences of unhealthy behaviours. Researchers also looked at the type of thinking style the participants had in threatening situations, specifically their level of cognitive avoidance (measured by a questionnaire). This is a disposition for avoiding unwelcome or threatening information. The argument was that high cognitive avoiders would read the threat as lower than it actually was, as they would be avoiding the reality of the message.

2   Two health messages were given to participants, both hypothetical. They talked about how levels of caffeine consumption could affect the likelihood of developing a fictional condition called Xyelinenteritis, which was described as a digestive disease. In the high-threat condition, participants were told that caffeine could cause Xyelinenteritis, which would then lead to stomach cancer. In the low-threat condition this link to cancer was not mentioned. Both groups were informed that they should reduce their caffeine consumption.

Results

Nestler & Egloff found that cognitive avoidance levels did affect the reaction of participants and the level of threat they perceived. In high-cognitive avoiders researchers found that they underplayed the threat level in the high-threat condition to below that of the low-threat communication and were consequently less likely to reduce caffeine intake. This shows that not everyone reacts similarly to health promotion literature and campaigns and assumptions cannot be made about reactions of individuals. This is because of differing cognitive styles.

Conclusions

This research examines the behaviour change approach and shows that assumptions cannot be made about how someone will react to information they are given.

Evaluation

This is important work looking at the thought processes involved behind health promotion and, as such, has a useful application for ensuring that campaigns are appropriate for all. This will improve their effectiveness.

▨ Research

- In a review of health promotion literature, **Wallerstein (1992)** found that a lack of power, or lack of control, is a risk factor for disease. Self-empowerment can therefore be shown to be an important factor in health promotion, although measuring self-empowerment is difficult to do in a valid and reliable way, so the exact effect is difficult to ascertain.

- **Armstrong (2000)** examined the use of garden programs in New York State to facilitate health promotion. She found that gardens in low-income areas were four times more likely to help the communities they served in terms of issues of social support, and so on. Health benefits were evident too. This illustrates that community health and well-being can be enhanced by a better social and physical environment.

▨ Evaluation

- The self-empowerment strategy to improve health is seen by some as placing the blame of poor health onto the individual. Dispositional factors, as outlined in the first section of this chapter, illustrate that this is out of the control of the individual in some cases.

- Conversely, self-empowerment techniques in health promotion are designed to give the individual control over their health. Lack of control is linked to poor health due to the level of stress it induces. Therefore, by making an individual feel in control, not only are they more likely to do something and act, but also their levels of stress are reduced. This means that the health benefits will be two-fold.

- Self-empowerment has been shown to help adherence to good health practices. For example, **Funnell & Anderson (2004)** looked at adherence to medication regimes in diabetics and they found when the patient retained an element of control they were more likely to stick to the medication administration needed. This meant their illness was well managed. Self-empowerment health promotion campaigns therefore not only help to initiate healthy behaviour, they also increase the likelihood of the behaviour continuing.

- Research by **Nestler & Egloff (2010)**, above, illustrates that assuming a message will be perceived a certain way is problematic. There are no guarantees that the target population will react how they 'should'. This means that campaigns are very difficult to design and execute effectively.

Strengthen your learning

1 In your own words, state the World Health Organization's five key principles to encourage good health.

2 Explain the:
  a self-empowerment approach to health promotion, with focus on the 'This Girl Can' campaign
  b community development approach, including reference to the Temple of Heaven
  c behaviour change approach, including reference to the British Heart Foundation campaign and the 1980s AIDS awareness campaign.

3 Summarize what research studies have suggested about approaches to health promotion.

4 Assess approaches to health promotion in terms of their strengths and weaknesses.

5 For Nestler & Egloff's 2010 contemporary study of 'when scary messages backfire', in your own words, state the:
  a aims
  b procedure
  c results
  d conclusions
  e evaluative points.

6 Explain the role of the following as tools of health promotion:
  a mass media
  b legislation
  c source characteristics.

7 Summarize what research studies have suggested about the role of the following as tools of health promotion:
   a mass media
   b legislation
   c source characteristics.

8 What other evaluative points can be made about the role of the following as tools of health promotion:
   a mass media
   b legislation
   c source characteristics?

Tools of health promotion

Role of mass media

Corcoran (2007) defined the mass media as including television, radio, print-based media and electronic/social media. This is a key tool for health promotion owing to the reach of its various mediums.

Within health promotion a campaign usually uses several elements, but the emphasis is now moving to social media, although this depends on the audience it is trying to reach.

One of the key advantages of using the mass media is that a campaign can be targeted and portray simple messages; these have impact and, owing to their simplicity, can be emotive and easy to remember. The problem arising in recent times is the amount of false information that can be circulated, especially on social media. An example of this was the incorrect publication of information on the contraceptive pill and blood clots, which led to a decrease in numbers of women taking the pill and consequently an increase in abortion rates. Something similar happened with research that suggested autism could be developed following the MMR vaccine, although the research was later shown to be falsified. This led to a decrease in parents having their children vaccinated, which led to dire consequences in terms of children developing measles, mumps and rubella.

Legislation

Legislation can be used to promote health behaviours by restricting the availability of products, such as alcohol, that can lead to poor health. It can also be helpful in terms of making products too expensive via taxation and finally advertising can be restricted. All these measures have been used to try and decrease the number of smokers. For example, in the UK there are age restrictions on buying cigarettes, the packets are taxed heavily and cigarette advertising is also banned from the mass media. There are even restrictions now on the packaging of cigarettes in an effort to make them less attractive.

Source characteristics

The choice of person giving the message in a health promotion affects the likelihood of it being effective. There must be a similarity between the messenger and the recipient of the message. For example, in the Everyman Campaign launched by the Institute of Cancer Research in 1999, pop star Robbie Williams was selected to get the message about testicular cancer across to the target audience (men). He was chosen as a role model to men aged 20 to 35. In the advert Robbie wears a pair of false breasts and says 'Hey you know, if you men paid more attention to these (*grabbing his crotch*) instead of these (*pointing to the false breasts*) then maybe fewer of us would be dying of testicular cancer. So go and check 'em out.'

Research

■ **Sharf (1997)** conducted an analysis of the use of online discussion forums for breast cancer awareness. She found that the forums helped foster awareness and self-empowerment in women and also that there was much social support expressed for each other. This illustrates the important role that mass media can play in promoting positive health behaviours.

■ **Meyers *et al.* (2009)** reported a 17 per cent decrease in hospital admissions for acute myocardial infarctions (heart attacks) following a smoking ban in public places, enforced

■ **Figure 7.7** Everyman, the campaign to raise awareness of testicular and prostate cancer, used celebrities such as Robbie Williams to promote their message

using legislation. This shows a direct use of legislation in promoting good health and reducing illness.

■ **Chapman & Leask (2001)** argued that sometimes use of a celebrity/role model can be counterproductive in promoting healthy behaviour. In Australia, in 1998, Shane Warne, a famous cricketer, was a key figure in a smoking cessation attempt, paid for by a pharmaceutical company. Unfortunately, he failed to stop smoking and the resultant effects were very negative for the company. Part of the issue was the large payment he received. This illustrates that paying large amounts of money to celebrities can be counterproductive. The fact that he did not actually stop smoking also caused a very negative reaction and a lot of press coverage.

◼ Evaluation

■ The use of mass media in a health promotion campaign is now a necessity. Organizing an effective campaign without harnessing the help of mass media is difficult. However, it also has the potential to backfire and work against those promoting good health, as in the example of Shane Warner (see **Chapman & Leask, 2001** above).

■ The process of legislating health is a long one, so using the law as a method of health promotion is often too drawn out, especially when quick action is needed. Often legislation is the end result of campaigns that have failed to change behaviour in a sufficient number of the population.

■ Selection of an appropriate role model to figurehead a campaign is a difficult choice. It relies upon the ability of the celebrity to act in a healthy way too and to ensure there is no negative press during the campaign. However, although potentially a risky strategy, there is little doubt that the correct figurehead for a campaign can be very powerful.

◼ Evaluating the effectiveness of health promotion campaigns

The effectiveness of health promotion is not just important to measure because of the costs of the campaign, but also to ensure the message has been conveyed sufficiently. If not, then more campaigning may be necessary.

Evaluation is a process involving setting aims and choosing the most appropriate evaluation method(s). The choice is dependent on resources available to you, such as the research team size, facilities, services and material resources. It is necessary to have a baseline measure which may come, for example, in the form of statistics. This allows the researcher to start to build a 'before campaign' and 'after campaign' picture.

Each campaign has its own aims and objectives and evaluation of the effectiveness must focus specifically on those aims and objectives. For example, if the campaign is focused upon drug use in 18- to 25-year-olds, they must be the target population for the measure of effectiveness.

One of the most important aspects of designing an evaluation is to find a good way of taking a baseline measure. This means you can establish a 'before' picture. This can be done by using statistics. Often the baseline measure forms the case for the campaign, as it illustrates a need for the intervention.

◼ Research

■ **Van Hasselt *et al*. (2015)** conducted a review of health promotion effectiveness evaluation in severe mental illness. They found that there were key areas that were not being considered in making the decision of the effectiveness. One example was measuring akathisia, which is restlessness or fidgeting. This is characteristic in many patients with severe mental illness and is a behavioural characteristic observed by others. Any intervention should be effective in reducing this physical effect. In the literature this was never used as a measure of effectiveness. They also found that some measures were inappropriate, such as self-report for smoking. If someone is mentally ill this judgement is problematic. Indeed it could be argued that this method is not accurate in those not severely mentally ill. This suggests that context must be considered when designing a campaign, especially with a clinical population.

- **Pommier *et al.* (2010)** reviewed evaluating health promotion in schools. They developed a research protocol to be used by researchers based on good practice. Key aspects were ensuring that both qualitative and quantitative methods were used and ensuring that the design was realistic as this would ensure it was completed properly and there would be sufficient uptake in schools.

Evaluation

- One of the hardest things to do once you have designed a baseline measure and run the intervention is to show that any changes in statistics can be attributed to the intervention itself. Causation often cannot be proven, but if your pre-intervention statistics and measures are comprehensive then your case can be stronger.
- **Allen & Flack (2015)** in their paper on the ethics of health promotion evaluation talk about issues in the evaluation of campaigns in terms of accuracy and honesty. They talk about how the need to show a positive effect can affect researcher integrity, with figures being skewed when the researcher has a conflict of interest. This means that the reliability of research into effectiveness needs to be considered carefully.
- Determining the level of effectiveness is difficult in health promotion. If the sample is large, a significant effect or significant relationship can be reported. The actual figures of people affected can be surprisingly low. Whether this is a sufficient number is in some ways affected by the motivations and costs involved.
- Evaluation must be specific to the context. The requirements of mental health interventions and schools both require due consideration considering their vulnerable populations. A 'one size fits all approach' is not appropriate for all campaigns.
- The case study below of Stoptober ('Psychology in the real world') illustrates how a campaign can be assessed.

PSYCHOLOGY IN THE REAL WORLD

Case study of a health promotion

Aim

Stoptober is an annual campaign to encourage cigarette smokers in the UK to stop smoking for the month of October.

The campaign

In 2012, Stoptober was the first national smoking cessation campaign that was aimed at all smokers in the country, urging them to quit for one month. It is now an annual campaign that is designed to focus upon stopping for four weeks, with the idea that this will mean that smokers stop for good. The first year it ran was 2012 and it used the mass media, including social media, to send a sustained message to smokers to be smoke-free for the duration of October. The smokers who pledge to give up are supported by health professionals such as GPs and pharmacies and all smokers who intend trying to quit. They also receive an online pack and digital tools such as apps to help and support them. In addition they are offered the chance to be sponsored by family and friends to encourage them to stay smoke-free for the whole month. In 2017, Public Health England also encouraged use of e-cigarettes to help the process for the first time.

This is an example of the use of mass media to promote good health. The message is simple: Quit smoking for October and you will find it easier to stop smoking totally.

Theory behind the campaign

Principle 1: Social cognitive theory argues that if there is a group of people focused upon a common goal, then the message of that goal, such as 'Quit smoking for a month', will be stronger. In other words, the influence of being part of a group will amplify the effect.

Principle 2: SMART goals are more likely to be effective. The goals set by Stoptober are Specific (stop smoking), Measurable (you either smoke or you do not), Achievable (it is possible to stop), Realistic (it is only for one month, initially) and Time based (one month). This means that the message is clear and positive.

Principle 3: PRIME theory argues that for behaviour change to work it has to consider the whole motivation system. Stoptober did so by positive messaging throughout to try and combat those moments of weakness. The fact that many others were also quitting meant that there was an overall effect on levels of motivation. The level of support available online and in the environment also helped those trying to stay smoke-free by making them feel supported.

Effectiveness

Brown *et al.* (2014) examined the effectiveness of the first 2012 Stoptober campaign. They did this by comparing the numbers of smokers trying to quit before and during the campaign. Brown had the details of 31,366 smokers who had reported smoking in the period 2007 to 2012 (when the campaign was released). They were both cigarette and other forms of tobacco smokers. The researchers asked the participants to report any attempts to quit smoking they had made in the period leading up to the Stoptober campaign. They also asked them to report when the attempts were and how often they had made a serious attempt to stop. They also gave demographic information such as their age, gender and social-grade. In addition, they were asked to give details on how many cigarettes they smoked per day (or pipes or cigars).

Researchers then examined the number of attempts to stop in October, compared with the average number over the preceding months. They examined if there was an interaction in the month of October. Patterns were observed year on year as there are expected peaks in the number of quit attempts at certain points in the year, as part of the annual cycle. For example, there is always a peak in attempts to stop smoking at the beginning of January in line with the idea of new year's resolutions.

In terms of effectiveness, one measure used was the number of live years gained. This is the expected extension to lifespan that would occur if someone stopped smoking permanently. The statistics for this assessment also took age into account, as it was recognized that the age at which the person stopped smoking would mean that they would benefit to a varying degree (older people would gain less).

The researchers were also aware of potential relapse so, when calculating the projected figures on live years added onto life, set the potential number of 'permanent quitters' at 2.5 per cent. They argued this to be a realistic and conservative figure based on previous research of quit attempts.

Results

The results found were as follows:

- Quit attempts were higher in October 2012 than in previous months and years.

- October was traditionally a month with lower-than-average attempts to stop smoking. However, in 2012 this pattern was reversed, with an increase in attempts to stop of 4.15 per cent.

- There was no evidence that Stoptober was effective in certain demographic groups. The effect seemed to be equivalent over the whole social spectrum.

- Cost-effectiveness of the campaign was calculated to be greatest for people in the 35 to 44-year-old age group and least cost-effective for those under 35 years old.

- The research also looked at effectiveness in terms of public health impact. The number of participants to have given up as a result of the campaign was described as being 8817, which was from a total number of quit attempts of 352,662.

Evaluation

- A causal association cannot be made, as this research measured effectiveness by comparing average figures and the difference in October of the campaign year. It is possible that there were other factors that affected the success or otherwise of the campaign.

- The campaign compared well with other attempts to encourage cessation of smoking. However, its main aim was to elicit a mass-cessation and this was not achieved, given that the number of smokers in England at that time far exceeded the number who actually tried to stop.

- This campaign did not use the usual tactic employed by mass media campaigns of a negative message which arouses fear. It was an encouraging and positive message of cessation being a possibility. This was an important message for planning future campaigns. It could be argued that this campaign used a self-empowerment approach.

- The fact that there was no apparent demographic effect would suggest that it is possible to design a campaign which promotes good health for all. This then has the potential to be wider reaching.

YOU ARE THE RESEARCHER

Choose a health promotion campaign and design a method to evaluate its effectiveness. What would you use as measures? What ethical and methodological considerations would you have to make?

Strengthen your learning

1 Explain how the effectiveness of health promotion campaigns is evaluated.

2 Summarize what research studies have suggested about evaluating the effectiveness of health promotion campaigns.

3 What other evaluative points can be made about evaluating the effectiveness of health promotion campaigns?

4 Explain how the effectiveness of the 'Stoptober' campaign was assessed. How effective was the campaign concluded to be?

5 What evaluative points can be made about the assessment of the effectiveness of the 'Stoptober' campaign?

SECTION SUMMARY

- Health promotion uses various approaches to encourage good health choices, including the self-empowerment approach, the behaviour change approach and the community development approach.
- To do this, different tools are used such as the mass media, legislation and source characteristics (appropriate delivery of the message).
- Health promotion programmes have been shown to be successful in several ways, but measuring the effectiveness of a campaign is difficult.

■ Assessment check

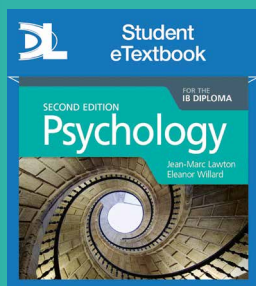|		
1	Discuss the ethical considerations of research into health promotion.	(22 marks)
2	Discuss health promotion.	(22 marks)
3	Discuss one or more studies related to the effectiveness of health promotion programmes.	(22 marks)
4	Evaluate the effectiveness of health promotion programmes.	(22 marks)
5	Discuss the effectiveness of two health promotion programmes.	(22 marks)

SECOND EDITION

Psychology

Everything you need to navigate the IB Diploma Psychology course; ensure full coverage of the syllabus with a comprehensive guide to all the concepts, theories and research into approaches to understanding behaviour, presented with a cross-cultural focus for global thinkers.

- Navigate your way seamlessly through the course with key studies and terms highlighted.
- Apply new skills and knowledge to everyday life with topical news items (**In the News**) and case studies (**Psychology in the real world**).
- Develop critical analysis skills with **You are the researcher** and **Research in focus** to draw out methodological issues from studies, while **TOK links** help you recognise debates and issues.
- Assess your progress and learning with **Strengthen your learning** and **Assessment check** at the end of each section.
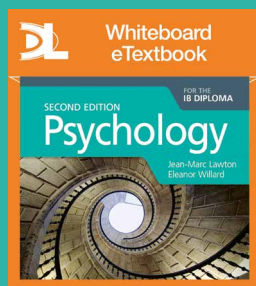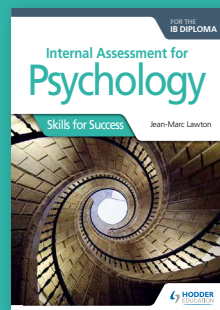
Also available for Psychology for the IB Diploma:
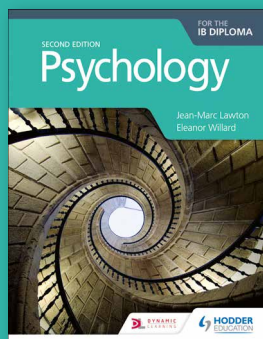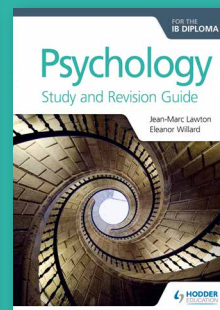
ISBN: 9781510425774   ISBN: 9781510425217   ISBN: 9781510425224   ISBN: 9781510449527   ISBN: 9781510449534

To find out more or place an order please email
international.sales@hoddereducation.com