HL IB Psychology

Promoting Health

Contents

Health Promotion

Fear arousal as a health promotion method

- **Health promotion** is the process of helping people to exert **control** over their health behaviours in order to **improve** their health
- **Fear arousal** often uses vivid **imagery** to **raise awareness** of **risky** health behaviour e.g. pictures of **damaged lungs** on cigarette packets.
- Fear arousal has to strike a **balance**: if the **messages** are too **anxiety-provoking**, behaviour becomes **defensive** and people then **avoid** the message or even **engage more** in the activity (Brown & Smith, 2007).
- However, **low fear** appeals are also ignored as they do not produce the **motivation** to change
- A **change** in health behaviours in response to fear arousal is more likely if the individual concerned has a high level of **self-efficacy** and feels capable of changing their behaviour (see **self-efficacy as a health promotion tool**, below)

Evaluation of fear arousal

Strengths

- Fear arousal has been shown to be effective in **reducing smoking** and also in one-off **interventions**, such as **health screenings** (Tannenbaum et al., 2015)
- Fear arousal works particularly well when **combined** with a message emphasising individuals' self-efficacy and control over their own health

Limitations

- Fear arousal is less effective in long-term health changes, such as **dieting or exercise** to improve **cardio-vascular** health
- Fear arousal ignores the role of **sociocultural factors** on health, such as **peer pressure** and social and cultural **norms**, which could reduce its effectiveness

Social cognitive theory in health promotion

- **Social cognitive theory** places behaviour within social contexts: the individual is affected by their **environment** and may **learn** behaviours from **role models** e.g. a boy is inspired to join the school football team from observing his older brother play in a team
- Observational learning must involve **attention**, **retention**, **self-efficacy** and **motivation** (see the revision note on SCT as part of the Sociocultural Approach)
- A change in health behaviour is more likely if the individual concerned has a high level of **self-efficacy** and feels capable of changing their behaviour (Witte and Allen, 2000)
- **Self-efficacy** is a key concept of **social cognitive theory,** demonstrating that someone has to feel capable of carrying out an observed behaviour i.e. they believe that they can be successful in achieving it
- Social cognitive theory has been applied successfully to increase the self-efficacy and to change the health behaviours of people managing **long-term health challenges,** such as **diabetes** (Smith et al., 2020)

Evaluation of social cognitive theory in health promotion

Strengths

- **Social cognitive theory,** and especially the concept of **self-efficacy,** provide an explanation for why some people do not respond to **fear arousal messages** (**motivation** is a key component of behaviour change)
- Social cognitive theory has been applied to help people **manage** their health conditions at home, also increasing their feeling of self-efficacy as they maintain some **independence**

Limitations

- **Social cognitive theory** disregards the role of **physical addiction**, which can undermine self-efficacy and lead to a **continuation** of unhealthy behaviours
- The theory also cannot account for **individual differences** in **outcome expectations,** as changes in some addictive behaviours, for example, can result in losing friends and thus bring **resistance** to change

Research which investigates health promotion

- **Quist-Paulsen et al. (2003)** found that an anti-smoking programme based on fear arousal and relapse prevention was effective for patients with heart disease
- **Lowe et al. (2004)** found that social cognitive theory could be used successfully to promote healthy eating in British school children

Both Quist-Paulsen et al. (2003) and Lowe et al. (2004) are available as 'Two Key Studies of Health Promotion' – just navigate to the next section of the Health Promotions topic.

Two Key Studies of Health Promotion

Key study one: Quist-Paulsen et al. (2003)

Aim:

- To investigate the effect of **fear arousal** on rates for **quitting smoking**

Participants:

- 240 smokers below the age of 76 who had been admitted to the **cardiac ward** of a Norwegian hospital

Procedure:

- **Field experiment** with **random allocation** of participants to either:
  - the 'fear arousal' (FA) **condition** - 118 participants
  - the **control** condition - 122 participants
- **The FA condition:**
  - hospital nurses recruited by the researchers gave the FA participants a booklet on the **benefits** of quitting smoking
  - the booklet included **graphs of mortality rates for smokers** compared to non-smokers
  - participants were told that the likelihood of them having another smoking-related **heart attack** was **high** (the FA element of the **intervention**)
  - the FA participants were also given:
    - information on quitting smoking and remaining cigarette-free
    - advice about **nicotine replacement therapy**
    - an **action plan** to help deal with **relapses**
    - **instructions** not to smoke while in the hospital
    - advice on using **nicotine patches**
  - If their partners smoked, they were also asked to quit
- **The control condition:**
  - the same hospital nurses offered the control participants twice-weekly **group sessions**
  - in these sessions, a **range** of topics was discussed including quitting smoking

- the control participants also watched a video
- these participants were given a booklet on heart disease that included advice on quitting smoking

- The nurses then contacted the FA participants by phone nine times after they went home, to encourage them to stop smoking

Results:

- After **one year**, 57% of the FA group had stopped smoking compared to 37% of the control group

Conclusion:

- Fear arousal may be an **effective way** of **motivating** smokers who are in danger of having a further heart attack to quit smoking

Evaluation of Quist-Paulsen et al. (2003)

Strengths

- The use of a **sample** of real smokers who had already experienced cardiac problems gives the results of this research high **ecological validity**
- The fact that the FA was only used in the intervention group increases the validity of the claim that fear arousal makes the difference in smokers' quitting rates

Limitations

- It may have been the extra attention and support that the FA group was given that motivated the higher quitting rates rather than the FA element
- The control group participants did not experience the FA and subsequently showed a 20% lower incidence of quitting, which is an **ethical concern**

Key study two: Lowe et al. (2004)

Aim:

- To investigate if **social cognitive theory** could be used to promote healthy eating in British schoolchildren

Participants:

- 749 children, aged 5 - 11 years old
- Participants attended one of two inner-city London primary schools.
- One school served as the control group and the other school engaged in the healthy eating intervention called the Food Dudes Programme

Procedure:

- This was a **longitudinal field experiment**
- A **baseline** of consumption of fruit and vegetables eaten in both school and at home was taken:

- children in both schools were given the option of consuming fruit and vegetables at lunchtime and the amount they ate was **measured**
- younger children (aged 5 - 7) received fruit at snack time and the **weight** of this was **recorded**
- **questionnaires** were given to parents regarding their children's eating behaviours

- For 16 days children in the **experimental schoo**l watched six-minute videos featuring the **Food Dudes** who:
  - are seen enjoying a range of fruit and vegetables
  - show that eating fruit and vegetables is the key to their power in defeating the evil 'Junk Punks' who eat junk food and want to destroy the world
- This is how **social cognitive theory** is used in the experiment - to give the children **role models** whose behaviour they may **imitate**
- After each video, teachers read the children a letter from the Food Dudes, explaining:
  - the need to fight the Junk Punks
  - the benefits of eating a healthy diet
  - how they could get **prizes** for eating well
- Each child in the **experimental condition** was given a 'Food Dudes' Home Pack'
- This home pack encouraged them to eat more fruit and vegetables at home
- Their parents were encouraged to record what they were eating
- This is the next step of social cognitive theory: explaining to them that they can 'help,' and giving them a plan to increase their **self-efficacy**
- **After 16 days, the videos ended and the rewards for eating healthily were less frequent**
- Fruit and vegetable consumption levels were measured four months after the completion of the programme

Results:

- Children in the experimental condition **significantly increased** their fruit and vegetable consumption both at school and at home
- The greatest increase was seen in the children who at the beginning of the study had shown the lowest baseline consumption rates of fruit and vegetables
- Four months later, they were still eating **twelve times** as much fruit as they had originally, and four times the **quantity** of vegetables
- In the control school there was no change in the children's fruit and vegetable consumption

Conclusion:

- This healthy eating programme based on the **principles** of social cognitive theory was successful in changing the eating behaviour of young London schoolchildren

Evaluation of Lowe et al. (2004)

Strengths

- The study had a large **sample size** and the programme was highly **standardised,** allowing for potential **replicability** and suggesting the findings have high **reliability**
- The longitudinal design, baseline measurements and use of a control group, allow for a **cause-and-effect** relationship to be demonstrated between the intervention and the increase in fruit and vegetable consumption

Limitations

- The findings of the study may not be **generalised** outside the **target population** of young schoolchildren aged between 5 and 11 years old
- The four-month follow-up may not be long enough to be sure of the **long-term effects** of the programme - a six-year follow-up of other schoolchildren who had taken the programme found no lasting effect (Martin et al., 2017)

Worked Example

The question is: *'Discuss one or more ethical considerations in health promotion.'* [22]

The command term "discuss" requires you to offer a considered and balanced review of the ethical considerations in health promotion. Opinions or conclusions should be presented clearly and supported by appropriate evidence from one or two studies. Here are two paragraphs for guidance.

Health psychologists need to pay attention to ethical considerations when introducing a health promotion intervention. Health promotion strategies and programmes are often introduced to help those vulnerable to health problems or unhealthy behaviour, such as hospital patients or young children. However, it is important that researchers communicate the aims of the intervention clearly and explain that in order to assess the effectiveness of the programme it will be necessary that only approximately half of the participants will receive the intervention. This means that there will be one experimental group and one control group. The researchers will need to gain fully informed consent from the participants, or from parents or guardians in the case of young children.

For example Lowe et al's (2004) study into the effects of the Food Dudes campaign in a London primary school required that parents of children who underwent the programme gave fully informed

consent, as well as those in the control school. This fully informed consent should include the right to withdraw for the children in the experimental condition. There are rare cases where digestive problems mean that a child cannot eat too much fruit or vegetables and parents need to be sure that the child keeps to a diet that is medically necessary. Children in the control group were excluded from a potentially beneficial programme, and so the informed consent should have included details for their parents of how to be part of the programme, or where to access the materials.

Effectiveness of Health Promotion Programmes

The effectiveness of fear appeals as part of health promotion programmes

- **Health promotion programmes** often rely on **fear arousal** as part of their efforts to change people's health behaviour
- This strategy aligns with the general aim of health promotion, which is to enable people to exert **control** over and improve their health (WHO, 1986)
- The **effectiveness of fear appeals** is affected by a number of factors, including:
  - the level of **self-efficacy** of an individual
  - the level of positive **outcome expectations**
  - the level of perceived **susceptibility** to a disease
  - the tone of the message (not too fear-provoking, but not too weak)
  - the level of **social support** the individual has for the health behaviour change
- Most of the above are out of the **direct** control of **health psychologists**
- Health promotion programmes should not rely solely on fear arousal - they have to address a range of factors which may impede an individual's attempts to become (and to stay) healthy

Evaluation of fear appeals as part of health promotion programmes

Strengths

- **Fear appeals** have been shown to be particularly effective when a person has received a doctor's **warning** about their susceptibility to a **disease**
- Fear appeals are also most effective with **females** when the appeals include efficacy messages and emphasise susceptibility (Tannenbaum, 2015)

Limitations

- **Health promotion programmes** often use **social media** or **television** to get their fear appeals out, but it is unlikely that sampled participants can accurately **self-report** how much of the campaign they have seen/heard, leading to lower **validity** of the findings
- It is difficult to measure the effectiveness of fear appeals over a long period of time to identify if the effectiveness is simply **short-term** or **long-lasting**

The effectiveness of taxing sweetened drinks as a health promotion programme

- In 2016 the WHO published a report calling on countries to introduce taxes and subsidies for food to encourage responsible and healthy eating **habits**
- The WHO recommends people to consume no more than 25g of **added sugars** per day
- Most foods have **natural** sugars in them; 'added sugars' are sugars or syrups that are mixed into nearly all **processed** foods to improve **flavour**
- **Sweetened soft drinks are** the number one source of added sugars in Americans' diets, contributing to tooth decay, obesity and **type 2 diabetes** (Johnson et al, 2009).
- By 2023, 108 countries had introduced a sweetened soft drinks **tax** (WHO, 2023)
- Since 2016, research has pointed towards a **levelling off** or even a drop in the amount of added sugar being consumed **globally**

- At the beginning of 2014, Mexico introduced a tax on sweetened soft drinks
- The results, from a study conducted by the Mexican Public Health Institute, showed:
  - on average there was a 6% decline in the amount (ml) of taxed sweetened drinks bought during 2014 and the downward trend reached 12% by December 2014
  - those from **low-income households** reduced the amount of taxed sweetened drinks they bought more than any other group
  - low-income consumers reduced their purchases by an average of 9% during 2014, reaching a 17% reduction by December 2014
- Worldwide research has found that **low-income populations** have the largest health benefit from sweetened drinks taxes, because their pre-tax consumption was high and post-tax reductions are relatively large
- In many countries, taxes raised from this measure have been invested into the national health system

Evaluation of taxing sweetened drinks as a health promotion programme

Strengths

- **Taxing sweetened soft drinks** has been shown by research to be successful in reducing their consumption
- This tax policy has become more acceptable to governments and the public through the transparent action of **investing the tax gains** into health promotion

Limitations

- There is a **lack of research** directly linking the sweetened soft drinks tax with health benefits, such as improved dental health or reduction in obesity
- There are **variations** in the tax implementation, with almost 46% of countries also applying it to unsweetened bottled water, discouraging consumers from switching to this healthier alternative

Research which investigates the effectiveness of health promotion programmes

- **Murphy-Hoefer et al. (2020)** found that the Centers for Disease Control and Prevention (CDC) anti-smoking programme based on fear arousal helped over 1 million people give up smoking
- **Nakhimovsky et al. (2016)** found that imposing a tax on sweetened soft drinks could reduce consumption, but this would not be enough to reduce obesity overall

Both Murphy-Hoefer et al. (2020) and Nakhimovsky et al. (2016) are available as 'Two Key Studies of the Effectiveness of Health Promotion Programmes' – just navigate to the next section of the Effectiveness of Health Promotion Programmes topic.

Two Key Studies of the Effectiveness of Health Promotion Programmes

Key study one: Murphy-Hoefer et al. (2020)

Aim:

- To determine the 7-year impact of the **Tips From Former Smokers (Tips)** campaign on smoking **prevalence** in the USA:
    - The Tips **campaign** was a 2012–2018 campaign that interviewed former smokers with health problems to make short **fear-arousal** videos that were distributed on national **media** outlets

Procedure:

- The **Centers for Disease Control and Prevention (CDC)** collected **data** from an ongoing national online **survey** of adults in the USA between 2012 and 2018 (7 years)
- Current cigarette smokers were defined as people who smoked at least 100 cigarettes in their lifetime and who smoked every day or some days at the time of survey
- At the time of the campaign (2012) there were an estimated 28.3 million smokers in the USA
- Data on 9,635 current smokers was collected to assess the impact of Tips **campaign** on attempts to **quit** smoking and **estimates** as to how long quitting had been **sustained** for

Results:

- Sustained quitting was estimated during 4 of the 7 years of data in the **analysis** and **averaged** 7.2%
- There was an average of 3.9% **increase** in quit attempts per quarter
- There were approximately 16.4 million quit attempts and more than one million estimated sustained quits lasting at least one year

Conclusion:

- A sustained health promotion programme using **fear-arousal** videos can be successful when it is based on **scientific evidence** and is of sufficient **intensity** and **duration**

Health promotion messages have become more creative over the years - this one is on a crossing in Singapore

Evaluation of Murphy-Hoefer et al. (2020)

Strengths

- The findings of this **large-scale longitudinal survey** are supported by three previous studies looking at the results of the Tips campaign for individual years and therefore are likely to be **reliable**
- The **sample** was drawn from a **random sampling** of US household postal addresses and therefore the results are **generalisable** to the general US population

Limitations

- The researchers measured only the results from television exposure and not other media and therefore the figures may be an **underestimation** of the true picture
- The analysis used an average campaign effect estimated from 2012 to 2018 and these large figures may hide many small group differences and ignore **extraneous variables** that could affect the results

Key study two: Nakhimovsky et al. (2016)

Aim:

- To conduct a **systematic review** of the effectiveness of taxation of sweetened soft drinks on o**besity** in middle-income countries

Procedure:

- Nine studies from Brazil, Ecuador, India, Mexico, Peru, and South Africa were reviewed
- The researchers measured the **association** between taxes on sweetened soft drinks and their consumption
- Outcomes reflecting **percentage change** in **body mass index (BMI)**, prevalence of obesity, or prevalence of obesity and being overweight were also measured
- It was not possible to measure outcomes in all of the studies, as in some cases the data had not yet been gathered as the tax was only recently introduced

Results:

- The reduction in sweetened soft drinks purchased relative to their price was higher (9.1%) among the lowest income group
- Milk, fruit juice, bottled water and tea were all identified as partial **substitutes**
- The studies which measured effects on obesity all found a significant reduction of around 3% in obesity levels

Conclusion:

- Taxing sweetened soft drinks reduces their consumption and could also also reduce obesity levels, though more research is needed on this

Sweetened soft drinks are partly responsible for obesity, tooth decay and type 2 diabetes

Evaluation of Nakhimovsky et al. (2016)

Strengths

- The researchers selected the studies they analysed carefully, and checked the studies' **funding sources**, **methodology** and **statistical** analyses in order to increase the reliability of their findings
- This research fills a gap in the literature as there are very few studies investigating the link between a sweetened soft drinks tax and obesity

Limitations

- The sample is small, and so generalisation to other middle-income countries is limited
- There is no way of knowing if obesity levels continued to drop after the study had finished i.e. the findings may have shown a **temporary** improvement in health

Worked Example

The question is: *'Evaluate the effectiveness of one or more health promotion programmes.'* [22]

The command term "evaluate" requires you to offer an appraisal of the strengths and limitations of the health promotion programme[s] and draw a conclusion as to their effectiveness. This conclusion should be supported by appropriate evidence from one or two studies. Here are two paragraphs for guidance.

The effectiveness of health promotion programmes is often difficult to measure, as it requires self-report from participants in programmes about their exposure to the media campaign or to the interventions from health professionals. This means the data is subject to memory failure and social desirability bias, which is why measurements that use triangulation of methods or studies that are supported by previous research are the most reliable. Murphy-Hoefer et al. (2020) investigated the effectiveness of the 'Tips from former smokers' health promotion programme that was aimed at encouraging smokers to quit. The programme used short videos, help-to-quit phone lines and media advertisements in order to try and reduce the prevalence rates of smoking in the USA. It has been viewed as successful and is about to be reintroduced in 2024.

The researchers analysed data from a nationally representative longitudinal survey of US adults who smoke cigarettes, aged 18 years or older in 2012–2018. The 9,635 participants were randomly selected using US household postal addresses and so the results can be generalised beyond the survey sample to the general US population. The results suggested that the Tips health promotion programme resulted in an extra 1 million more US adults giving up smoking between 2012–2018. These findings were supported by findings from previous research while the programme had been continuing, and so have increased reliability. However, the researchers just measured the results from television exposure and not other media and therefore the figures may be an underestimate. Moreover, this shows correlation only, and there may be other variables that affected the number of people quitting smoking as well as the effects from this programme.

Summary Table: Key Studies of Promoting Health

Key Studies Summary of Health Promotion

SUMMARY TABLE: KEY STUDIES OF PROMOTING HEALTH	
Topic	**Two Key Studies**
Health Promotion ▪ Use both of these studies to answer a question on health promotion ▪ Use Lowe et al. (2004) to answer a question on the effectiveness of health promotion programmes	Quist-Paulsen et al (2003) Lowe et al. (2004)
Effectiveness of Health Promotion Programmes ▪ Use both of these studies to answer a question on the effectiveness of health promotion programmes ▪ Use Murphy-Hoefer et al. (2020) to answer a question on fear arousal as a health promotion method	Nakhimovsky et al. (2016) Murphy-Hoefer et al. (2020)

How do I use these studies in an exam question on this topic?

- IB students have a *lot* of content to cover (particularly students taking Psychology at Higher Level) so the purpose of this revision resource is to slim down and streamline the number of studies you need per topic/exam question
- The exam question command term will be one of the following: 'Evaluate', 'Discuss', 'Contrast' or 'To what extent'
- Each command term requires you to answer the question in slightly different ways, using the content as shown in the summary table above i.e. specific studies per topic/question
- In order to slim down the content you need to revise you can see above how some of the studies can be used for more than one potential exam question
- Lowe et al. (2004) and Murphy-Hoefer et al. (2020) can be used to answer more than one potential exam question on Paper 2 content so you may decide to keep these studies and 'throw away' any studies which you find that you don't need to revise
- Remember that all Paper 2 questions are ERQs (Extended Response Questions) which are worth 22 marks, take an hour to write and need to be rich in critical thinking