



Explanations of Food Preferences

This Factsheet outlines and evaluates explanations of **food preference**. The Factsheet includes examiner comments, and the worksheet gives you the opportunity to apply what you have learned to exam-style questions. Words in bold are explained in the glossary.

The examiner will expect you to be able to:

1. Outline two or more explanations of food preference
2. Evaluate these explanations in terms of strengths and limitations
3. Support your answer with reference to published research.

Introduction

In the Western world today, we have access to a wider range of food than at any time in our history. Advances in agriculture, technology and transportation have meant that foods that were once only available at certain times of the year, such as fresh fruit and vegetables, are now available from shops and supermarkets all year round. Furthermore, our multi-cultural societies have given us exposure to different flavours and recipes from around the world which previous generations would never have tasted. Not only this, but we don't even have to leave our homes to access this food; everything from frozen foods to hot take away meals are only a click on an internet site away from being delivered to our door.



It may seem surprising then that, despite all of this choice, the majority of people still show clear a preference for certain types of food and certain flavours. In particular, foods that are sweet or have a high calorie content still sell extremely well even though we are more aware than ever of the health risks posed by such foods. As a result, across the Western world there has been a steady rise in cases of obesity, along with all of its related health problems, such as diabetes, and the dieting industry is more popular now than ever before. This makes it all-the-more important for psychologists to understand the factors that shape our food preferences so that we can start to tackle these growing health problems across society. There are a number of explanations of food preference including **evolutionary explanations**, and **social learning theory** which will be discussed in this Factsheet.

Exam Hint: You can use the example rising obesity and related health problems to help evaluate explanations of food preference. This is because a greater understanding of what causes us to have the food preferences we have, may lead to strategies being developed to help people make healthier food choices, thus improving peoples' health across society.

Evolutionary Explanations of Food Preferences

Evolutionary explanations propose that individuals who behave in ways that increase their chances of surviving are more likely to pass on their genes to the next generation through a process of **natural selection**. Such individuals are said to have high 'fitness'. In terms of food preferences, this 'fitness' might be a preference for foods that supply the right nutrients and energy to function effectively. Equally, 'fitness' in terms of eating behaviour might involve an ability to detect poisonous foods. Such an ability would reduce the individual's risk of being poisoned before they have had the chance reproduce and pass on their genes. Over time, genetic characteristics such as innate preferences for certain foods therefore become more widespread in the gene pool and part of the species.



Evolutionary Preference for High Calorie Foods

In our evolutionary past, food supplies were often limited or erratic. Our distant ancestors could not rely on a continual source of food for their daily nutritional needs. Evolutionary psychologists argue that such times would have favoured those with an instinct to maximise stored energy. Therefore, binge eating high calorie foods would have been considered **adaptive**. Sweet, fatty or salty foods would be particularly sought after since they provide energy which was vital to survival. Indeed, a preference for sweet tasting food may be seen as advantageous to survival because this is often a sign of ripeness, high concentration of sugar, and a quick fix of calories. Food and drink with these properties would have given our ancestors the energy needed to survive and therefore pass on this innate preference for sweet food to future generations.

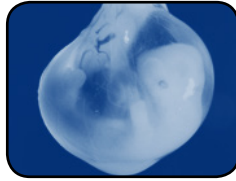
Furthermore, it would have been advantageous to overeat in times of plenty and then expend as little of those calories as possible in readiness for times of scarcity. In this sense, the obesity problems encountered by much of the Western world in today may be viewed as testament to an inability to escape this evolutionary pressure (Steven and Price, 2000). As predicted by evolutionary theory, people find it hard to ignore sweet or high fat food offerings even though they are readily and cheaply available all year round. Furthermore, although exercise could alleviate these problems, another **evolutionary hangover** is to conserve energy where possible and this helps explain why people now do this by avoiding exercise through the use of labour-saving devices such as lifts, cars and the dishwasher.

Evolutionary Avoidance of Potentially Dangerous Foods

Another food preference that can be explained by evolution is our widespread tendency to avoid bitter and sour tasting food. This is because bitter and sour tastes can be indicative of poison and it is therefore likely that the ability to detect bitter tastes developed as an evolutionary mechanism. This has resulted in the evolution of about 30 genes that code for bitter taste receptors in humans.

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Nowhere is this avoidance of bitter and sour tastes more evident than in pregnant women and young children. Early pregnancy is associated with many dietary changes. In particular, the avoidance of certain foods that can commonly produce responses of disgust and vomiting. Morning sickness is experienced by 75% of pregnant women and it has a convincing evolutionary explanation. The **embryo protection hypothesis** (Profet, 1992) explains that in early pregnancy, when the embryo's organs are still forming and it is most vulnerable, the foods most avoided by pregnant women due to their ability to trigger sickness are those that appear to have the greatest chance of damaging the embryo. For example, alcohol, coffee and tea all contain caffeine which can damage the developing organs whilst meat and eggs are common sources of bacteria which could lead to harmful infections. This sickness reaction therefore helps the mother avoid foods that may be detrimental to her pregnancy, while the vomiting prevents any toxins entering the bloodstream and affecting her baby.



When children grow old enough to start eating solid foods, many show a disgust response to sour and bitter tastes too, along with a range of new flavours they have not sampled before. **Food neophobia** (or reluctance to try new or unfamiliar foods) is common in young children and can greatly restrict the variety of foods a

child consumes. Again, this can be explained by evolutionary theory as a survival strategy when we are faced with 'a world of potential foods whose safety is uncertain' (Prescott, 2013). For humans, food neophobia is particularly strong in response to foods derived from animals rather than non-animal products (Martins et al, 1997). This is likely to have evolved because of the greater health risks posed by, for example, rotting meat compared to non-animal products (Fessler, 2002).

Exam Hint: When outlining evolutionary explanations, many answers make the mistake of referring to 'learning' to behave in ways that are good for survival. For the highest marks, answers should avoid referring to 'learning' and should instead refer to genes or instinctive/innate/inborn drives in order to show a clear understanding of evolution as a biological process rather than a learning process.

Evaluation of Evolutionary Explanations

Bell et al (1973) gave sweet sugary foods to Inuit people in Northern Alaska who had previously lacked sweet food and drink in their diets. They found that, in all cases, they did not reject the sweet food and drinks of the other culture. This suggests that a preference for sweet tastes is not culturally learned and may therefore be an innate food preference that is the result of evolution.



However, evolutionary explanations cannot account for the way in which many people successfully change their diet to avoid eating too many high calorie foods, even when they are constantly surrounded by them. This is a problem as the evolutionary approach may ignore the role of other factors such as environmental learning.

Steiner et al (2001) found that bitter and sour tastes lead to a facial expression of disgust in both human infants and other young primates such as chimpanzees. This supports the evolutionary explanation of eating behaviour as it suggests we have inherited a survival instinct to avoid potentially harmful tastes and foods as have other, closely related species to increase their chances of survival.



Birch and Marlin (1982) found that when 2-year-old children were given novel foods over a 6-week period, children usually started to show a food preference shift after a minimum of 8-10 exposures. This suggests children do tend to have an instinctive avoidance of new foods but also that this can be relatively quickly tackled if a parent knows a particular food type is not a survival threat and demonstrates this by continually exposing the child to the food.

Social Learning Theory Explanation of Food Preferences

As children's parents usually provide food for them, it seems obvious that another factor that might influence our food preferences is our parents and their attitudes to food and eating behaviours. Children learn what to eat by watching their parents' eating habits as they grow. This can be explained by social learning theory (SLT) whereby children observe their parents' enjoyment of eating certain foods and want to achieve similar rewards themselves by imitating their behaviour. In this sense, the parents act as eating role models. This theory would therefore argue that children should show similar preferences to their parents having learned these preferences from them through a process of **vicarious learning**.

Although our parents play a key role in influencing our food preference in our early lives, as we grow older, the influence of peers and the media grows too. SLT can help explain how this influence occurs. It is argued that observing same-age peers can have a particularly strong influence due to the fact they are people with whom we identify and are more likely to act as role models. This can have positive or negative effects on our food preferences. Observing a peer eat and enjoy an unfamiliar food might encourage us to try the food, exposing us to a greater range of beneficial nutrients. Conversely though, observing a peer refuse an unfamiliar food or respond with disgust decreases the chances of us trying that same food.

In terms of media influences on our food preferences, it is argued that role models online, in films, and on television can have an impact both on what people eat, and also on their attitudes to certain foods. The media has helped promote healthy eating through the depiction of role models making healthy food choices in cooking programmes, for example. However, adverts often promote a wide range of unhealthy food choices with powerful and persuasive campaigns promoting foods that are high in calories, often with the help of celebrity role model endorsements.

Exam Hint: When outlining SLT explanations of food preference, aim to use the words 'observe', 'role model' and 'imitate' to ensure you are explaining this accurately. There is a risk of explaining the role of parents, peers and the media in a very basic manner without the required level of psychological ideas and terminology so using these terms will help ensure you avoid these issues.

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Evaluation of Social Learning Theory Explanation

Duncker (1938) found that, when children observed a series of role models including older children, a friend, their mother, an unknown adult, and a fictional hero making food choices different to their own, all the role models had an impact on the children's subsequent food choices except the unknown adult. This supports the idea that children's food preferences can be shaped through observation and imitation of a variety of different role models.



However, Robinson et al (2001) found a more complex association between the behaviour of parents and their children's food preferences, with girls being more influenced by parental modelling than boys. This suggests vicarious learning does not function in the same way for everyone and highlights the potential role of gender.

Jansen and Tenney (2001) found that when primary-age children saw significant others (such as peers) eating sugar free food, the number of children showing a preference for this 'light' food increased. This implies role models could be used to encourage children to make healthier food choices, in school or in the media, for example.

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However, despite the positive effects that exposure to role models can have, research suggests the media has an overall negative effect on viewers' food preferences. Cairns et al (2013) found the majority of food marketing on television promoted unhealthy

foods. This may suggest a need for greater censorship and regulation of the media to help address this influence which may impact negatively on the health of people in society.

Conclusions

It is difficult to know whether it is innate evolutionary influences or learnt, environmental influences which play the biggest role in determining our food preferences. This is complicated further by more practical matters such as where we live, and how much money we have. For example, we may have a very strong preference for certain foods that we are never able to eat simply because we cannot afford to buy them, or cannot access them in the country or area in which we live. All of this makes it very difficult to fully understand the factors that shape our food preferences. Nonetheless, ongoing research is vital if we are to try and find effective ways of addressing the growing public health issues that have arisen as a result of our often unhealthy food preferences.

Glossary

Adaptive

The ability to change to suit different conditions. In terms of evolutionary psychology, this refers to behaviours that enable the individual to survive the challenges posed by their environment.

Embryo protection hypothesis

The theory that sickness and avoidance of certain foods during pregnancy serves the evolutionary function of protecting the developing embryo.

Evolutionary explanations

Any theory that modern behaviours exist because they solved challenges faced by our distant ancestors.

Evolutionary hangover

Any behaviour that may have enabled our ancestors to survive in their environment but is problematic to humans in the modern environment.

Food neophobia

An extreme dislike and avoidance of new or unfamiliar foods.

Food preference

The way in which people choose foods from those available on the basis of evolutionary, biological factors or learned perceptions.

Natural selection

The evolutionary process by which individuals who possess traits or abilities that enable them to survive the challenges posed by their environment are more likely to pass their genes on to the next generation.

Social learning theory

An explanation of human behaviour whereby behaviour (in this case food preference) is learned through observing and imitating the actions of role models.

Vicarious learning

The process of learning behaviours through observing the actions of role models and the consequences of these actions (e.g. reward and punishment) before choosing whether or not to imitate them, rather than learning through direct experience.

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Worksheet: Learning Styles

Name: _____

1. Summarise the evolutionary explanation of food preference.

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2. Explain one strength and one limitation of the evolutionary explanation of food preference.

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3. Outline the social learning theory explanation of food preference.

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4. With reference to relevant research, briefly evaluate the social learning theory explanation of food preference.

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