

FACTORS INFLUENCING ATTITUDES TO FOOD AND EATING BEHAVIOUR

Mood

It has long been known that food influences our mood, and that mood has a strong influence over our choice of food. It used to be thought that people became obese because they ate for emotional reasons, whereas thin people ate because they were hungry. However, current psychology believes that people eat in response to their mood *regardless* of their weight. One area of research interest is in so-called '**comfort eating**'.



Comfort foods are defined as: "those which evoke a psychologically comfortable and pleasurable state for a person, who is attracted to them by a combination of physiological and psychological needs". Snack foods and desserts are commonly thought of as comfort foods, but there are wide individual differences in what people eat. For example, chocolate or ice cream may be a comfort food for one person, whilst steak or soup may function in the same way for another.

Azar (1998) has argued that *social context* is an important influence on what is chosen as a comfort food. A man who is used to having food prepared for him may have developed stronger preferences for hot or prepared foods as comfort foods. A woman who is used to preparing food may have fewer comfort-related associations with hot foods, and may instead prefer more convenient and less preparation-intensive foods as comfort food.

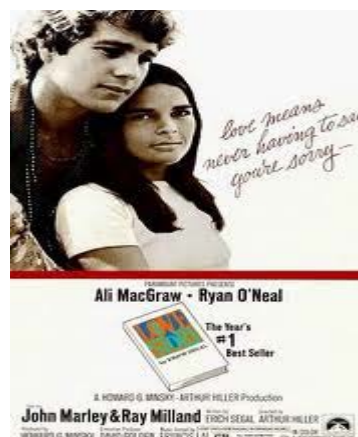
Cowart & Beauchamp (1991) propose that our choice of comfort food is also influenced by our *childhood experiences*. Thus, chocolate is considered to be pleasurable by most people because it combines favourable sensory qualities with the positive connotations of gifts and

rewards that were developed in childhood. Our choice of comfort food is also related to the fact that when we eat foods we like, the body releases trace amounts of *opiates* which both elevate our mood and increase our satisfaction with that food.

For many of us, the experience of eating junk food when feeling sad strikes a familiar chord. To study this, **Garg et al (2007)** looked at how happiness and sadness induced by watching a film influenced peoples' eating behaviour. Participants in the study were told that the researchers were interested in their evaluation of two films over a two day period. On the first day, half of the participants watched a funny film (*Sweet Home Alabama*), whilst the other half watched a sad and depressing film (*Love Story*). On the second day, this was reversed.



Throughout the films, participants were given the opportunity to eat popcorn and seedless grapes. The researchers measured how sad and happy the films made the participants feel. As expected, participants reported feeling happy when they watched *Sweet Home Alabama*, and sad when they watched *Love Story*. The interesting finding is that when they watched *Love Story*, they consumed **36%** more popcorn, but ate more grapes when they watched *Sweet Home Alabama*.



The researchers interpreted these findings by suggesting that when we feel sad or depressed, we want to 'jolt ourselves out of the dumps' and so we are more likely to eat food which tastes good to us to give a sudden rush of euphoria. If we are already happy, we want to extend that mood and so we choose healthy rather than unhealthy food (i.e. the grapes rather than the popcorn).

NOTE: Chocolate does have a slight anti-depressant effect for some people. However, when it is eaten as an emotional eating strategy (such as when we feel depressed), it is actually more likely to *prolong* rather than alleviate negative mood, particularly if used repeatedly.

The form of mood that has been most widely studied is **stress**, and the main issue is whether we eat *more* or *less* when we report feeling stressed. Research indicates that both of these occur. For example, **Popper et al (1989)** found that marines ate less during stressful combat situations, whereas **Wardle et al (2000)** found that office workers ate more saturated fats and sugar during periods of high workload.

This apparently contradictory relationship between stress and eating is called '**the stress eating paradox**' (**SEP**). One explanation for the SEP is called the **General Effect Model**. According to **Greeno & Wing (1994)**, stress causes various physiological changes which affects eating behaviour. For example, **Antelman et al (1975)** induced stress in rats by pinching their tails. The researchers found significant increases in gnawing, eating, and licking food. However, as well as raising ethical issues, research with non-humans also raises issues about generalising findings from them to humans.

When humans have been studied, the results have not been consistent. **Michaud et al (1990)** found that the stress of forthcoming examinations did increase the calorie intake of fatty foods such as snacks in schoolchildren. However, **Bellisle et al (1990)** compared the amount and type of food eaten by a group of men on the morning before they underwent surgery (presumed to be stressful) and the day after they had undergone it (presumed to be non-stressful). There was *no evidence* of any changes in how much or what type of food was eaten.

This lack of support for the *General Effect Model* has led to an alternative explanation being proposed. This is called the **Individual Differences Model**. According to this, people who are *highly vulnerable* to

stress respond to it with an environmental or physiological change that *promotes* eating. By contrast, those with a *low vulnerability* to stress respond to it with a different environmental or physiological change that *does not promote* eating. This model therefore suggests that people with different levels of vulnerability will differ in their eating behaviour when faced with stress.

One such group of people is '**emotional eaters**'. Emotional eating refers to a tendency to eat more when emotionally aroused or anxious. Stress is assumed to lead to an increase in eating because some people can't distinguish between anxiety and hunger, and respond to stress as though it is hunger. Unfortunately, the evidence is mixed, with some studies showing that emotional eaters do eat more following experimentally induced stress (e.g. **Oliver et al, 2000**), but others showing no such effects (**Conner et al, 1999**).



Other research has looked at gender differences in eating as a response to stress. For example, **Grundberg & Straub (1992)** provided participants with sweet, salty, and bland foods while they watched either an unpleasant and stressful video or a neutral video. They found that men in the neutral video condition ate more than participants in any of the other conditions. Of the women, those who watched the stressful video ate more *sweet* food than those who watched the neutral video. This finding suggests that stress goes some way to influencing our food *preferences* as well as our overall eating behaviour.

Again, though, the findings in this area of research have been contradictory. For example, **Stone & Brownall (1994)** found that both men *and* women were likely to eat less in response to a stressful event, and that women were actually *less likely* to increase their eating as the severity of the stress increased.

Clearly, whilst mood can influence eating behaviour, very little is actually *known* about how or why this happens.

Parental influences

One factor that affects children's attitudes to food is their parents. In an early study, **Duncker (1938)** looked at the impact of '*social suggestion*' on children's food choices. Children observed a series of role models sampling food that was unfamiliar to the children. The models were other children, a friend, the mother, an unknown adult, and a fictional hero. Duncker found that the children were most likely to sample the food that was modelled by their mothers, indicating that parental behaviour and attitudes are an essential part of how children acquire their eating behaviours.

Social Learning Theory (SLT) emphasises the impact of observing other peoples' behaviour on our own behaviour, and is also known as '**modelling**' or '**observational learning**'. Thus, children learn about eating not only through their own experiences, but also by watching others. As Duncker's study shows, one way in which children acquire their eating behaviour and attitude towards food is by observing the behaviour of their parents.



Of course, parental attitudes to food *inevitably* affect children because parents *control* the foods bought and served in the home. However, numerous studies suggest an association between parents' and childrens' attitudes to food *generally*, which offers very strong support for SLT. Some of the research findings are summarised below:

THE RELATIONSHIP BETWEEN PARENTS' AND CHILDRENS' ATTITUDES TOWARDS FOOD

Birch & Fisher (1998) Children's food related knowledge, preferences and consumption are related to their parents' preferences, beliefs, and attitudes towards food.

Ogden (2007) Even in children as young as 2, food preferences are strongly associated with their mother's food preferences.

Skinner et al (2002) Food preferences developed in infancy remain relatively stable and are reflected in food choices made later in life.

Patrick & Nicklas (2005) Children and parents show similar patterns of food preference and acceptance.

Fisher et al (2002) Children's intake of fruit and vegetables is positively correlated with their parents' intake of fruit and vegetables.

Tibbs et al (2001) Parental modelling of healthy dietary behaviours is correlated with their children's attitudes towards those behaviours.

Brown & Ogden (2004) There are consistent correlations between parents and their children in terms of snack food intake, eating motivations, and body dissatisfaction.

Birch & Fisher (2008) The best predictors of a daughter's eating behaviour are the mother's dietary restraint and her perception of the risk of the daughter becoming overweight.

All of these studies show that parental behaviour and attitudes are central to the process of social learning, with research highlighting strong positive correlations between the diets of parents and the diets of their children.

However, although parents have a major influence on a child's attitudes toward food, they are not the only influence. One important influence is the **media**, and research shows that the media have a major impact both on what people eat and their attitudes towards certain foods (**MacIntyre, et al 1998**).

Another important influence is children's **peers**. In a study designed to change children's eating behaviour, **Lowe et al (1998)** showed children videos of 'food dudes'. These were older children who were shown enthusiastically consuming food that the younger children with a history

of food refusal would not eat. The researchers found that exposure to the 'food dudes' significantly changed the children's food preferences and specifically increased their consumption of fruit and vegetables.



However, whilst food preferences can change through watching others eat, this is not always a good thing. **Meyer & Gast (2008)**, for example, have found a significant correlation between peer influence and *disordered eating* in 10-12-year-old boys and girls.

Although parental (and media and peer) influences are important, attitudes to food are clearly a product of much more than social learning alone. As we will see, evolutionary explanations of food preference suggest that our preference for certain kinds of food is a direct result of an evolved adaptation among our distant ancestors over two million years ago. Thus, nature as well as nurture can influence our attitudes to food and our eating behaviour.