



Food and happiness

Food and
happiness

Mabel Blades

Freelance Dietitian and Nutritionist, Rushden, UK

449

Abstract

Purpose – This short paper seeks to examine some concepts on food and happiness.

Design/methodology/approach – An examination of information on the subject from conferences, web sites, books, magazines and the literature was examined.

Findings – While there is relatively little information on food and happiness in the literature, some conclusions on food and happiness could be made.

Originality/value – This paper provides a brief overview and some conclusions on the relationship of food and happiness.

Keywords Food products, Individual psychology, Obesity, Behaviour

Paper type Viewpoint

Introduction

Happiness is defined as a state of well-being characterised by emotions ranging from contentment to intense joy and is experienced when in a state of well-being; it is being increasingly recognised as a new science. In the Lionel Robbins Memorial Lecture of 2003, Richard Laynard described happiness as “feeling good and enjoying life” (Laynard, 2003).

A study of nuns in 2001 showed that those who experienced more positive emotions lived longer than those who did not (Danner *et al.*, 2001).

Without food we cannot survive, so all aspirations are meaningless without the basic fuel of food.

Maslow (1943) described his hierarchy of need as a five-stage pyramid model with:

- (1) the biological and physiological needs including food, shelter and sleep at the bottom of the pyramid;
- (2) safety needs like protection and laws the first tier from the bottom;
- (3) belongingness and love needs the second tier from the bottom;
- (4) esteem needs second from the top of the pyramid; and
- (5) self-actualisation with personal growth and fulfillment at the top.

Our diet in the UK is generally acknowledged to have changed dramatically over the last three decades with a greater consumption of processed foods, more sugar and salt, less fibre, less vegetables and less omega-3 fatty acids. Some researchers such as Weissman *et al.* (1996) and Peet (2004) believe that this change in diet may have contributed to a rise in depression.

It is difficult to tease out dietary factors alone as there have also been major changes in society with reductions in physical activity plus alterations in family and social networks.

Methods

An examination of the research literature shows little on food and happiness. A few organisations cover information on food and mood. For example the British Dietetic Association (2006) provides a fact sheet on food and mood.



MIND, a charity focussed on better mental health, has a project on food and mood on its website (MIND, 2008), while the British Heart Foundation (2009) also provides information on its website on food and mood and also the effect of depression on heart disease.

Neurotransmitters are chemicals produced by the brain and include dopamine and noradrenaline, which make people feel alert and energised, while another neurotransmitter, serotonin, makes people feel happy and calm.

There is a lack of information on food and happiness in conventional textbooks on nutrition. The key text book for dietitians and students, the *Manual of Dietetic Practice* (Thomas and Bishop, 2007) includes comprehensive information on nutrition and mental illness rather than on enhancing mood.

Books on popular psychology abound in bookshops, yet few deal with food. Magazines frequently have headlines on articles such as “Short cuts to health and happiness” (*My Weekly*, 2009), while other magazines show pictures of media personalities who have gained weight due to stress and comfort eating.

An examination of the research literature shows little on food and happiness. At the conference “Happiness and its Causes” held in London in October 2008, no mention of food was made apart from in respect of side effects such as anorexia, and nausea with antidepressants (Kirsch, 2008). The “Vitality Show”, held at Earls Court in 2009 also had no focussed information on food and mood or happiness.

Some advertisers quote happiness in their advertisements for foods such as pizza, while a hotel group quotes it on their cups.

Findings

Comfort eating

Emotional eating, as comfort eating is correctly termed, is well recognised, with the British Nutrition Foundation describing it in its textbook on obesity (British Nutrition Foundation, 1999). Many people suffer from the condition, including such celebrated individuals as Oprah Winfrey (Mutanda and Pearson, 2007). Depression and stress can alter food consumption, with some sufferers avoiding food and others over-eating.

Weight loss

In the USA and the UK 80 per cent of women and 50 per cent of men are recorded to be on a diet at any one time even though they are not obese. “Happiness may go with a successful diet plan and misery an unacceptable one” (Butler and Hope, 2007). Self esteem can be higher when able to restrict the food intake but lower when one overeats. Yet a survey published in the *Daily Telegraph* (2008) showed that size 14 women were the happiest size.

Stress is associated with an increased food intake and increases the production of hormones such as cortisol, which in turn increases the production of glucose in the liver and stimulates the degradation of skeletal muscle. Thus stress can be considered to contribute to obesity in some individuals (Bjorntorp *et al.*, 2001)

Meal times and snacks

Knowing someone who is happy increases your likelihood of happiness by 15.3 per cent (Fowler and Christakis, 2008) as shown by the Framingham Heart Study over 20 years. Therefore communal eating may be of great importance to health and happiness.

Nine hundred women studied in Texas showed that happiness was associated with positive activities such as socialising, eating and also exercising. Dinner was shown to have the highest happiness score with lunch slightly lower and shopping and cooking just below that (cited by Laynard, 2003, 2005).

The glycaemic index (GI) (which is the way different carbohydrate foods are digested and absorbed), has an effect on the maintenance of blood glucose levels and is considered beneficial to a positive mood, so regular meals and foods with a low GI are of obvious importance. Gross *et al.* (2005) considered this to be an important contributor to depression in a group of people with diabetes.

Overeating is associated with a feeling of being less happy. Depression checklists often include questions on appetite and overeating and bingeing (Burns, 1993).

A study of children showed that stress was associated with an increased likelihood of missing breakfast and favouring fatty snacks rather than fruit and vegetables (Cartwright *et al.*, 2003), while a study of students showed they ate fewer meals and more snacks (Oliver and Wardle, 1999).

Specific nutrients, foods, fluid and other substances

A number of nutrient intakes have been associated with mood and would therefore have an impact on happiness. The production of the substance serotonin in the brain is known to affect mood, with low levels being linked with depression. The amino acid tryptophan is a precursor for serotonin and high carbohydrate intakes are considered to facilitate the production of serotonin.

Caffeine

Low doses of caffeine (20-200 mg) are associated with positive effects on mood, while higher amounts are associated with anxiety and stress (Caffeinedependence.org, 2009). As shown in Table I, it can be difficult for a person to accurately estimate his/her caffeine consumption because of the wide differences in the amount of caffeine

Substance	Serving size (volume or weight)	Caffeine content (range, mg)	Caffeine content (typical, mg)
<i>Coffee</i>			
Brewed/drip	6 oz	77-150	100
Instant	6 oz	20-130	70
Espresso	1 oz	30-50	40
Decaffeinated	6 oz	2-9	4
<i>Tea</i>			
Brewed	6 oz	30-90	40
Instant	6 oz	10-35	30
Caffeinated soft drinks	12 oz	22-71	40
Cocoa/hot chocolate	6 oz	2-10	7
Chocolate milk	6 oz	2-7	4
Coffee ice cream	1 cup (8 oz)	8-85	50
<i>Chocolate bar</i>			
Milk chocolate	1.5 oz	2-10	10
Dark chocolate	1.5 oz	5-35	30

Table I.
Typical caffeine content
of common foods and
beverages

delivered in common foods as well as large differences in common serving sizes. For instance, the amount of caffeine in a serving of coffee can vary over a ten-fold range, from as little as 20 mg to 150 mg.

Alcohol

Alcohol in small amounts triggers the release of dopamine and serotonin and thus gives us pleasure. However, when taken in excess alcohol has the reverse effect and alcohol addiction is considered a meaningful indicator of unhappiness

Fluid

A lack of fluid can lead to feelings of tiredness and a lack of mental alertness.

Fatty acids

A lack of omega-3 fatty acids is considered to have an effect on the cell membranes in the brain, making them less receptive to the neurotransmitters. Lack of omega-3 fatty acids has been associated with irritability, depression and low moods (Ross, 2007).

Chocolate

Chocolate is associated with pleasure and happiness. It contains substances such as the stimulants theobromine and caffeine as well as anandamide, which is a neurotransmitter. Also, chocolate contains carbohydrate, thus making it an ideal comfort food.

Minerals

A lack of iron is well known to be associated with iron deficiency anaemia, which in turn results in symptoms such as tiredness and apathy, which are hardly likely to precipitate a happy state of mind. A lack of the trace element selenium is also thought to have a negative effect on mood (British Dietetic Association, 2006).

Magnesium is one of the components of enzyme catalysts and a lack of it can lead to depression and stress (Abraham and Lubran, 1981).

Vitamins

A lack of vitamin D is associated with a low mood and depression (Kierman and Weismann, 1989). Folate plays a role in the levels of neurotransmitters produced in the brain and together with the other B vitamins is regarded as being essential for mental health (McGarridge, 2008). St John's Wort has been shown in clinical trials to be as effective as conventional antidepressant medicine, with fewer side effects (Kirsch, 2008).

Conclusions

From the small amount of information available on the topic of food and happiness, it seems it is sought by everyone and is not associated with age, gender or income. Aspects of food and nutrition do appear to have a fundamental impact on happiness. The key factors seem to be relatively simple ones:

- eat regular meals;
- eat meals with companions;
- shop for foods and cook food;

- take adequate fluid;
- include some caffeine;
- include a small amount of alcohol;
- take adequate carbohydrate, especially those with a low GI;
- ensure that the diet contains enough iron, magnesium and selenium;
- take foods containing omega-3 fatty acids;
- take foods containing B vitamins and vitamin D; and
- try to be a healthy weight but not over-slim.

References

- Abraham, G. and Lubran, M. (1981), "Serum and red cell magnesium levels in patients with premenstrual tension", *American Journal of Clinical Nutrition*, Vol. 34, pp. 1264-6.
- Bjorntorp, P., Rossner, S. and Udden, J. (2001), "Consolatory eating", *Lakartidningen*, Vol. 98 No. 48, pp. 5458-61.
- British Dietetic Association (2006), *Food and Mood*, fact sheet, British Dietetic Association, Birmingham.
- British Heart Foundation (2009), available at: www.bhf.org.uk/living_with_a_heart_condition/understanding_heart_conditions/types_of_heart_conditions/heart_failure.aspx (accessed April 2009).
- British Nutrition Foundation (1999), *Obesity*, British Nutrition Foundation, Blackwell Science, Oxford.
- Burns, D. (1993), *10 Days to Self Esteem*, Vermillion, London.
- Butler, G. and Hope, T. (2007), *Manage Your Mind*, Oxford University Press, Oxford, p. 396.
- Caffeinedependence.org (2009), available at: www.caffeinedependence.org/caffeine_dependence.html (accessed April 2009).
- Cartwright, M., Wardle, J., Steggle, N., Simon, A.E., Croker, H. and Jarvis, M.J. (2003), "Stress and dietary practices in adolescents", *Health Psychology*, Vol. 22 No. 4, pp. 362-9.
- Daily Telegraph* (2008), available at: www.telegraph.co.uk/health/healthnews/4014153/Size-14-women-happiest-with-life-and-looks.html (accessed March 2009).
- Danner, D., Snowdon, D.A. and Friesen, W.V. (2001), "Positive emotions in early life", *Journal of Personality and Social Psychology*, Vol. 80, pp. 804-13.
- Fowler, J.H. and Christakis, N.A. (2008), "Dynamic spread of happiness in a large social network-longitudinal analysis over 20 years in the Framingham Heart Study", *British Medical Journal*, Vol. 337, p. a2338.
- Gross, R., Olsson, M., Gameroff, M.J., Carasquillo, O., Shea, S., Feder, A., Lantigua, F., Fuentes, M. and Weissman, M.M. (2005), "Depression and glycemic control in Hispanic primary care patients with diabetes", available at: http://scholar.google.co.uk/scholar?hl=en&rlz=1T4GGIC_en&q=author:%22Gross%22+intitle:%22Depression+and+glycemic+control+in+Hispanic+primary+care+..%22+&um=1&ie=UTF-8&oi=scholar (accessed April 2009).
- Kierman, G. and Weismann, M. (1989), "Increasing rates of depression", *Journal of the American Medical Association*, Vol. 261 No. 15, pp. 2229-35.
- Kirsch, I. (2008), "Do drugs make us happy?", paper presented at the Happiness and its Causes Conference, London, 9-10 October.

- Laynard, R. (2003), Robbins Memorial Lecture, 4-5 March.
- Laynard, R. (2005), *Happiness: Lessons from a New Science*, Penguin, London.
- McGarridge, S. (2008), *Mental Health*, Issue 9, The Knowledge, Biocare, Birmingham.
- Maslow, J. (1943), "Maslow's hierarchy of need", available at: www.businessballs.com/maslow.htm
- MIND (2008), available at: www.mind.org.uk/foodandmood/info/milestones.htm.
- Mutanda, A. and Pearson, A. (2007), *Celebrity Life Laundry*, John Blake Publishing, London.
- My Weekly* (2009), "My Weekly", *My Weekly*, No. 4957, 31 January.
- Oliver, G. and Wardle, J. (1999), "Perceived effect of stress on food choice", *Physiology & Behavior*, Vol. 66 No. 3, pp. 511-5.
- Peet, M. (2004), "International variations in the outcome of schizophrenia and the prevalence of depression in relation to national dietary practices: an ecological analysis", *The British Journal of Psychiatry*, Vol. 184, pp. 404-8, available at: <http://bjp.rcpsych.org/cgi/content/full/184/5/404> (accessed April 2009).
- Ross, B. (2007), "Omega 3 fatty acid deficiency in major depressive disorder is caused by the interaction between diet and a genetically determined abnormality in phospholipid metabolism", *Medical Hypotheses*, Vol. 68 No. 3, pp. 515-24.
- Thomas, B. and Bishop, J. (Eds) (2007), *Manual of Dietetic Practice*, Blackwell, Oxford.
- Weissman, M., Bland, R.C., Canino, G.J., Faravelli, C., Greenwald, S., Hwu, H.-G., Joyce, P.R., Karam, E.G., Lee, C.-K., Lellouch, J., Lépine, J.-P., Newman, S.C., Rubio-Stipec, M., Wells, J.E., Wickramaratne, P.J., Wittchen, H.U. and Yeh, E.-K. (1996), "Cross-national epidemiology of major depression and bipolar disorder", *Journal of the American Medical Association*, Vol. 276 No. 4, pp. 293-9.

Corresponding author

Mabel Blades can be contacted at: mabel@qmnds.demon.co.uk