Healthy eating

Health behaviours joint strategic needs assessment literature review

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Contents

Introduction

This short report on healthy eating – including nutrition in pregnancy, and eating disorders – completes a suite of literature review documents around the seven health behaviours incorporated in the joint strategic needs assessment (JSNA).

It complements the secondary data analysis report which can be found on the JSNA publications page with final health behaviours report.

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Healthy eating

Healthy eating is consuming the right quantities of foods from all food groups in order to ensure an individual's body is appropriately nourished and capable of functioning appropriately, dependent on lifestyle and activity levels. The current government guidelines for healthy eating include eating five portions of fruit and vegetables per day, reducing levels of salt and sugar, and ensuring alcohol consumption is limited.[1]

Healthy eating and physical activity are inextricably linked: a poor diet and physical inactivity are risk factors for many of the major conditions in the UK including cancer, coronary heart disease and diabetes.[2] They are almost as much of a risk for heart disease as cigarette smoking, high blood pressure, or a high cholesterol level, but tend to be more prevalent than any of these other risk factors.[3]

Healthy eating can be influenced by a number of factors including deprivation. Socially disadvantaged people and households have worse dietary-related health outcomes and poorer dietary behaviour than more affluent individuals and food poverty is becoming an increasing concern in the UK. Those who are most likely to experience food poverty are people living on low incomes or who are unemployed, households with dependent children, older people, people with disabilities, and members of black and minority ethnic communities.[4] Food poverty can also affect social participation and have negative effects on mental health. The ongoing stress of keeping a family or people fed on a limited income presents additional challenges.

According to the Trussell Trust there has been a 163% increase in the number of people accessing food banks since 2012-13, with 913,138 people receiving a three-day emergency food parcel (2013-14), compared to 346,992 in 2012-13 and 61,468 in 2010-11. Whilst the food banks provide a vital service, they are limited in the food they can provide and will not provide perishable goods, including fresh produce.[5]

A report from the Joseph Rowntree Foundation 'Managing on a low income' examined how families in poverty coped with feeding a household. Families were unlikely to be able to afford food such as fruit and vegetables, or take the risk of

buying food considered 'nutritious' in case the family would not eat it. Limited income prevented experiments with new foods and advice on healthy eating was not often considered feasible. The report found children tended to be given more of their favourite foods when compared to more affluent friends – such as burgers, fish fingers chips and beans – to avoid waste, rather than due to a lack of knowledge regarding nutrition.[6]

Income levels are linked to other factors which can influence healthy eating. Cooking and storage facilities are often problematic for some households, and the cost of gas/electricity can also prohibit consumption of healthy food. In these situations foods that are convenient are more likely to be eaten – this includes processed foods and takeaway or fast food. A perceived or real lack of time to shop, prepare and cook healthily, can also impact on a nutritious diet.

Other barriers to healthy eating include:

- lack of knowledge or education surrounding healthy eating;
- lack of knowledge or education around food preparation;
- poor accessibility to affordable food;
- inconsistent or unclear food labelling; and
- the marketing of high fat high sugar foods to children.[7,8]

The relationship between healthy eating and education is two-fold. Men and women with a lower level of educational achievement tended to have a less healthy diet than men and women with a higher level. Men and women with less education tend to eat fewer vegetables and more chips, fried and roast potatoes whilst less educated women also consume less fruit and fruit juice. Children in households with high parental education levels are more likely to consume healthier food, compared to children where parents had lower education levels.[9]

Education levels are closely correlated to income levels and the 'Health behaviours in school-aged children' report shows that children from the highest financial affluence score (FAS) group in England were more likely to report eating fruit than those from the lowest group (48% versus 26%). However, reported levels of fruit eating have decreased across all ages since 2006 when just over half of young people reported eating fruit every day. With regards to eating breakfast, this also decreased with age among young people, and again young people in the lowest FAS group were less likely to report eating breakfast than those in higher groups.[10]

The skills, confidence and knowledge for healthy eating in children is also linked to available teaching in schools and socioeconomic class, those children from the highest financial affluence score (FAS) group in England were more likely to have increased knowledge of fruit and vegetables and healthy food. Although children

from lower socioeconomic groups were more likely to prepare their own food/snacks, these tended to be less healthy than their more affluent counterparts.[11]

Healthy eating is also linked to higher academic performances amongst children. Poor nutrition can contribute to lower academic achievements in children and young people, with undernourished children showing a propensity for lower scores on standardised tests. They have been shown to have low energy levels and have difficulty concentrating, all of which interferes with learning. Those children who have a poor diet are also more likely to become sick, obese and to have increased absenteeism, which can have a massive impact on education performance.[12]

Alcohol is associated with pleasure, unwinding and being sociable. However, whilst alcohol is considered an acceptable part of British culture, excessive drinking and binge drinking can be problematic. In moderation alcohol can be a part of healthy diet. However, when drinking becomes excessive this can negate the effects of a healthy diet and a person's healthy eating behaviours can be compromised. Alcohol drinking is an independent predictor of lower percent body fat, especially in male alcoholics. Chronic drinkers are also more likely to experience malnutrition and abnormal body fat composition around the waist and stomach and this central obesity is associated with a statistically higher risk of heart disease, hypertension, insulin resistance and diabetes.[13]

Healthy eating and pregnancy

Eating well in pregnancy ensures the health of both the mother and the baby by providing the required vitamins, nutrients and minerals for healthy development. Healthy eating in pregnancy as advised by the NHS incorporates fruit, vegetables, protein, starchy foods, fibre and dairy.[14]

One of the biggest emerging issues related to pregnancy is the weight of the mother. It is estimated 15-20% of pregnant women are now classified as obese (BMI of more than 30). Being overweight or obese can result in negative maternal and perinatal outcomes such as gestational diabetes and an increased chance of a caesarean section for the mother.[15]

The cost to the NHS for dealing with overweight and obese mothers is getting higher. The prevalence of women giving birth with a known BMI of 35 or above is 5.0%. The prevalence of women with a pregnancy BMI of 40 or above is estimated at 2.0%, whilst the super-morbidly obese (BMI ≥50) account for 0.2% of women giving birth. This super-morbid group is almost nine times more likely than the average-sized mother to develop diabetes in pregnancy, more than five times more likely to suffer from pre-eclampsia and four times more likely to need intensive care, whilst half will have a caesarean section, twice the national average. Their babies are also more likely to be premature or have a high birth weight.[16] It has been reported that 35% of

women who died during pregnancy, childbirth or in the postpartum period and 30% who had a stillbirth or neonatal death were obese. Women who are obese are approximately twice as likely to have a stillborn baby as women with a healthy BMI, with the rate increasing the higher the BMI.[17]

Alongside obesity, the risk for gestational diabetes increases further for those of a South Asian heritage and those aged over 35 years. Women with a BMI ≥35 from black or minority ethnic groups are three and a half times more likely to have type 2 diabetes and over one and a half times more likely to have gestational diabetes than their white counterparts. Approximately 31% of women aged over 35 had a BMI in the super-morbidly obese category. With regards to deprivation, 34% of pregnant women in England with a BMI ≥35 were in the most deprived quintile (based on the index of multiple deprivation), compared to 27.6% for all maternities, indicating social deprivation is closely associated with maternal obesity.[18]

The Lifecourse Tracker survey commissioned by the Department of Health enables the tracking of core health behaviours over an individual's lifespan. It also provides the links and information between health motivations and specific health behaviours, enabling the Department of Health to provide a more overarching approach to delivering health messages to the public. The second wave of the survey (Oct 2013) noted that pregnancy can provide the motivation to make healthy behaviour changes and leading a healthy lifestyle was reported as a high priority for pregnant women. These healthy behaviours included stopping smoking, and eating more fruit and vegetables. Compared to mothers of children aged 0-2 years, pregnant women were significantly less likely to report eating fewer than five portions of fruit/veg a day (74% and 84% respectively). Of these, 74% were in socioeconomic groups ABC1* and 83% were in groups C2DE.[19]

A lack of fruit, vegetables and overall poor nutrition can also adversely affect pregnancy. A diet high in junk food (energy-dense, nutrient-poor food) can lead to a significantly higher birth weight (more than 4kg/8.8lb). The risks associated with a high birth weight for the infant include shoulder fractures, asthma, diabetes and certain cancers.[20] Higher birth weight babies may also be at increased risk for congenital anomalies, ongoing weight gain and the associated health issues around obesity and overweight when they are older.[21]

A reduced amount of vitamin D during pregnancy and breastfeeding can cause issues for the infant. Vitamin D regulates levels of calcium and phosphate, and if a pregnant mother does not have enough, the infant may have weak teeth and bones and potentially develop rickets. Other benefits of vitamin D include fighting infections, reducing the risk of diabetes and the risk from some cancers. Those who are at

* NRS demographic classifications, www.nrs.co.uk

highest risk of vitamin D deficiency in pregnancy are women of South Asian, African, Caribbean or Middle Eastern origin; women who have limited exposure to sunlight, such as those who are housebound; women who eat a diet low in vitamin D (no oily fish, eggs, or meat); and women with a pre-pregnancy body mass index above 30 (obese).[22]

The impact of poverty on health and nutrition of lower-income mothers and children is well established. Women from more disadvantaged groups are more likely to be obese, give birth to lower birth weight babies and less likely to breastfeed. People and households who are socially disadvantaged or have a reduced income tend to have worse dietary-related health behaviours and outcomes, including increased consumption of junk food. The Healthy Start scheme is a UK-based government initiative (introduced in 2006), which aims to improve the health of low-income pregnant women in the UK. It provides vouchers to pregnant women meeting certain benefit requirements, allowing them to purchase specific foods (milk, fruit and vegetables) and vitamin supplements until the child reaches four years of age. The scheme also provides information and advice on healthy eating, lifestyle, stopping smoking and breast feeding, providing a comprehensive resource for mothers and health professionals.[23]

Whilst women may have increased motivation to improve their own and their baby's health, the evidence around various lifestyle interventions and positive pregnancy outcomes is mixed. There is some indication that antenatal lifestyle, dietary and activity advice may restrict maternal weight gain and reduce the prevalence of gestational diabetes for the mother and adverse outcomes for the infant.[24] Therefore, an understanding of these health behaviours pre and during pregnancy, through the mother's own pregnancy-specific knowledge, and the provision of advice from health care providers, is important for developing interventions to influence nutrition and healthy eating.

Knowledge is considered a core determinant for behaviour change[25] and different sources of information should be targeted appropriately. For example leaflets may not be useful for women with low literacy levels or if there are language barriers. It is important that services are local and accessible, as this can be a major barrier for pregnant women. Interventions should be focused on the target population, and should take into account their requirements, suggestions and needs.[26]

The potential impact on child and maternal health could be far reaching with the changes to benefits, an increased number of people accessing food banks and families experiencing food poverty, meaning any gains made in this area could be quickly negated.

Eating disorders

Eating disorders such as anorexia nervosa and bulimia nervosa are mental health conditions characterised by unhealthy relationships with food, and for individuals with these conditions healthy eating does not occur. Anorexia is a psychological condition characterised by excessive food restrictions, obsession and inappropriate eating habits and rituals. Bulimia is characterised by food excess and restriction and binge/purge cycles. Both conditions can often co-exist with other psychiatric and psychological disorders, such as depression, substance abuse, self-harm and anxiety. Eating disorders can result in individuals experiencing other physical ailments such as heart conditions, organ failure and in some instances can be fatal.[27]

Anyone can have an eating disorder, regardless of their age, sex or cultural background. However, young women are more likely to develop one, particularly those aged 15 to 25 years. The average age of onset of anorexia is between 17 and 19 years. Children as young as seven can develop anorexia, and there are a greater proportion of boys in this younger age group. Adolescent boys with anorexia tend to over-exercise rather than restrict their food.[28] Bulimia tends to develop between adolescence and the early twenties, with females having an earlier onset compared to males. As previously noted an eating disorder can begin at any time but older individuals are more likely to develop bulimia than anorexia.[29]

Both males and females with eating disorders show disorder-specific personality characteristics, such as high levels of perfectionism, conflict-avoidant character styles and relationship difficulties. Anorexic males and females are likely to have problems with flexibility, a high drive for simplicity and maturity fears, alongside underlying anxiety and obsessive compulsive characteristics. Bulimic males and females tend to be novelty seekers and impulsive, often with a history of substance abuse. Individuals with borderline personality disorders are also more likely to have an eating disorder, self-harm or have other destructive and impulsive behaviours.[30]

There are many different factors that can make a person more vulnerable to developing an eating disorder. The associated risk factors for eating disorders include:

- a person's genes;
- parents with food issues;
- teasing and bullying about weight;
- abuse, neglect or abandonment in childhood;
- trauma or loss in childhood;
- obesity in childhood;
- difficult family relationships;
- being affected by the culture of 'thin' and dieting; and
- an individual's core personality and character, including low self-esteem.[31]

These risk factors and personality traits coupled with other influences such as the media can increase the likelihood of an eating disorder. With the development of the internet, there has been a large increase in online pro-eating disorder websites where users can find material to encourage the development and maintenance of an eating disorder. These sites tend to have 'thinspiration' sections, forums, tips on how to exercise, binge, purge and how to hide disordered eating behaviour. Overall, the aim of these sites is to encourage extremely low body weights but there are sites which do have sections devoted to recovery. Accessibility to this material is freely available on the internet, and has content from a variety of sources, including text, images, audio and video.[32]

There are also links between eating disorders and alcohol/drug misuse.[33] Substances which can be used to aid weight loss or provide energy include caffeine, tobacco, insulin, stimulants, over the counter medications, laxatives and diuretics, alcohol and illicit psychoactive substances. The use of any of these substances can become problematic as alcohol and illicit substances may also be used for emotional regulation or as part of impulsive behaviour patterns, causing more issues for individuals with an already poor diet.[34]

Education, guidance and support on nutrition, healthy eating and body image can play a major role in reducing the likelihood of an eating disorder. In addition to this developing a person's self-esteem, coping skills and interpersonal skills is also beneficial.

Conclusion

Healthy eating is vital for a person's mental and physical wellbeing. All partners involved in public health can work towards increasing the opportunities to eat healthily. These should include:

- easy access to quality fresh food;
- public transport links to food providers
- local food growing co-operatives;
- community gardens or allotments;
- regards to the number of takeaways in an area; and
- links with other wider determinants of health.

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Research evidence was identified and included from general evidence searches, plus specific searches of three bibliographic databases: CINAHL, PsycINFO, and MEDLINE. The studies were restricted by language of publication (English only), however, the geography/country was not restricted. The key terms of the health behaviours (stress, drugs, pregnancy, substance use, alcohol, tobacco, sexual behaviour, physical activity and nutrition), their synonyms, and combinations of these terms were used in the search strategies.