Department for Education

Holiday Activities and Food: Literature Review

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Executive summary

Introduction

This literature review was commissioned by the Department for Education with a view to understanding the evidence about the impact of school holidays on pupils, especially those from disadvantaged homes. This report reviews published evidence regarding two potential effects:

- Holiday learning loss: where pupils potentially lose academic skills and knowledge over the summer holidays. The review investigates evidence of the extent of holiday learning loss, who might be affected and what provision is effective to mitigate holiday learning loss.
- 'Holiday Hunger': where children and families are unable to afford sufficient nutritious food during school holidays. The review investigates evidence of the extent of holiday hunger, which children are affected and how they and their families can be supported during the holidays.
- The review also covers evidence on existing holiday food provision, including best practice on encouraging participation and attendance among disadvantaged groups.

Key findings

- There is no conclusive evidence on the extent of holiday hunger or holiday learning loss in England. Much of the evidence on the effects of holiday hunger and holiday learning loss and on effective provision to address these issues has been drawn from the international literature, especially evidence from the USA.
- Only a few UK providers of holiday activities with food had sufficient records to draw any substantive conclusions about best practice or value for money in holiday food and activity delivery. The most informative evidence came from those which had been formally evaluated.
- While learning from international (especially US) evidence, the review reveals a number of evidence gaps in the UK and a lack of evaluation of current provision to address both holiday hunger and holiday learning loss.

Holiday Learning Loss

- While the evidence from the United States is extensive due to its 13-week break drawing substantial research attention, evidence from other countries with shorter summer breaks, such as the UK, is limited. It is not apparent from the literature whether UK school pupils experience summer learning loss; although there is an assumption amongst teachers and educationists that they do (The Key, 2014), especially those from low income households who are already behind other pupils in attainment.
- Determining the true extent of holiday learning loss in the UK would require a robust programme of research to test pupils before and after the school holidays, with a further test at the end of the autumn term to validate the findings.
- Evidence about effective interventions is mainly limited to US literature. In the US, formal summer schools may be less effective than broader enrichment activities, but there is strong international and UK evidence that carefully monitored summer reading schemes are effective, especially those which have adult guidance and support built in. (Kim, 2004; Kim & White, 2011; Jesson et al., 2014; The Reading Agency, 2014; Turner & Tse, 2015).
- The voluntary nature of summer learning provision can make it difficult to attract the pupils most at risk and dropout rates can be high if the programme contents and delivery are not appealing as well as educational (Gorard et al., 2015).
- Some US evidence (Bell & Carillo, 2007; Blazer, 2011) indicates that a youth work approach to learning through enrichment activities, rather than an instructional model was most supportive of accelerating summer learning. The learning content needs to be somewhat different to the normal school curriculum and delivered in the context of the enrichment activities.
- The US evidence suggests that a combination of enrichment activities and academic instruction offers the best support to pupils at risk of learning loss and that provision should have experienced, well-qualified staff.

Holiday Hunger

- There is no conclusive evidence on the extent of holiday hunger in the England. The UK does not undertake official measurements of food insecurity (Taylor & Loopstra, 2016), unlike many other developed countries, so although some authors have attempted to arrive at a speculative number of

children who might be affected, for example Forsey (2017) who suggests three million, the actual number is unknown.

- International evidence on food insecurity indicates that persistent or repeated episodes of hunger have a negative effect on children's physical, mental and emotional wellbeing and impact adversely on attainment and achievement at school.

Encouraging participation in holiday activity and food provision

- Evidence from the US suggests that the best ways to encourage attendance include 'word of mouth' recommendations, verbal presentations to communities and calling door to door. Involving parents and carers can encourage participation and represents value for money in terms of marketing, while promotions such as competitions and free food for parents and carers have also been found to be effective in some programmes.
- Inviting parents to participate means that information can be provided about nutrition, housing and welfare. Whole family cooking activities benefit families in understanding how to make the best of low cost ingredients as well as being fun.
- It is important to avoid stigma. As noted by the Derbyshire school holiday food programme, the term "holiday hunger" is stigmatising to families experiencing hardship and should not be used when delivering provision. Close attention should be paid to the stigmatising effects on children, and parents and carers, of provision that is too closely targeted (Garthwaite, 2016; Lambie-Mumford & Sims, 2018; Stretesky et al., 2017).
- Targeting should be broad rather than refined and neutral settings can aid participation: for example, facilities in parks or community centres rather than a church or school. Food banks were felt to be stigmatising locations for delivery.
- Branding and marketing are important. There was evidence that term young people are put off by the term 'club'. Time needs to be allowed to market provision to the community.
- The greatest proportion of pupils on free school meals are those in Special Schools (35.7 per cent) and Pupil Referral Units (40.0 per cent). In addition, the evidence on food insecurity shows that a higher incidence of mental, emotional and physical health problems occurs amongst children and young people who are food insecure. The staffing of holiday activity and food

provision needs to reflect the probability of a higher level of special needs and challenge in the targeted groups.

- Evidence on food insecurity shows that children are affected emotionally and socially by a lack of food in the household even if they themselves receive sufficient food due to management of resources by the adults. Provision for children from food insecure households should include support for families as a whole especially in the light of the evidence to show that involving parents improves participation.
- Polemic debate could be minimised through the objective collection of official data on food insecurity and its impacts.

Effective holiday activity and food provision

- Provision for children experiencing hunger in the school holidays is ad hoc, piecemeal, informal and largely run by local charities and volunteers. However, there is also evidence that this informality may allow for some flexibility and sensitivity to local contexts.
- Evidence on effective holiday provision in the UK is limited, but some suggests that services which provide consistent, easily accessible, enrichment activities beyond just lunch or breakfast, and which involve parents and children in the preparation of food are those which work best.
- Centres which invite parents and carers to meals allow for advice to be given on other topics such as benefits, housing and relationships.

Background

This literature review was commissioned by the Department for Education with a view to understanding the evidence about the impact of school holidays on pupils, especially those from disadvantaged homes. This report reviews published evidence regarding two potential effects:

- Holiday learning loss: where pupils potentially lose academic skills and knowledge over the summer holidays. The review investigates evidence of the extent of holiday learning loss, who might be affected and what provision is effective to mitigate holiday learning loss.
- 'Holiday Hunger': where children and families are unable to afford sufficient nutritious food during school holidays. The review investigates evidence of the extent of holiday hunger, which children are affected and how they and their families can be supported during the holidays
- The review also covers evidence on existing provision, including best practice on encouraging participation and attendance among disadvantaged groups.

The report

This report assesses the UK and international evidence on both holiday hunger and holiday learning loss by drawing on published and grey literature. There is some evidence that both issues have a greater impact on children from disadvantaged homes than on their better off peers, which may contribute to the attainment gap between the two groups of pupils (Feinstein, 2003; Blanden & Gregg, 2004; Jyoti et al., 2005; Cooper & Stewart, 2013). The report places holiday learning loss and holiday hunger in the wider contexts of poverty, disadvantage and food insecurity and looks for practical solutions in the literature. Holiday learning loss, with the least evidence, is discussed first followed by discussion of the more extensive literature on holiday hunger and UK holiday provision. Lastly, available evidence about effective UK provision to support children and families in the school holidays is reviewed.

Although the evidence from the UK on both issues is limited, robust evidence from the United States (US) provides useful insights into the impacts of holiday hunger and holiday learning loss and ways in which they can be tackled. Wherever possible the review examines evidence from the UK, which is increasing in quantity and quality as the profile of the topics increases.

The limited nature of the UK evidence mean that it has been difficult to fully address the extent of research questions listed below. In particular there is little data offering

an accurate estimate of the numbers of children affected by holiday hunger and holiday learning loss.

While there is little UK provision to address holiday learning loss, provision for holiday hunger is frequently informal and ad hoc and often neither evaluated nor costed. Nonetheless, the review attempts to learn from the current state of provision in the holidays to understand what is most effective.

While learning from international (especially US) evidence, the review reveals a number of evidence gaps in the UK and a lack of evaluation of current provision to address both holiday hunger and holiday learning loss.

Research strategy

A research strategy was agreed with the Department for Education to review the evidence against the following set of pre-determined research questions.

Research Questions

Facilitators of successful school holiday provision

1. What factors maximise the participation of disadvantaged pupils in funded school holiday provision in the UK? For example:
    - Location of scheme
    - Type of scheme
    - Delivery of the scheme
    - Publicity
    - Involvement of wider family members

Holiday learning loss

2. What does evidence tell us about the existence or otherwise of ‘holiday learning loss’ in the UK?
3. What are the characteristics of those affected by ‘holiday learning loss’ in the UK?
    - Why is this cohort of pupils affected?

4. What does evidence tell us about effective ways to address ‘holiday learning loss’ in the UK?

Holiday Hunger

5. What is the prevalence of ‘holiday hunger’ among pupils in the UK?
    - What are the characteristics of those affected by ‘holiday hunger’?
6. What is the impact, if any, of ‘holiday hunger’ on pupils in the UK? For example:
    - Academic achievement
    - Wellbeing
    - Physical health
    - Mental health
    - Healthy eating
7. What does evidence tell us about effective ways to tackle ‘holiday hunger’ in the UK?
8. For any UK holiday schemes which have sought to address ‘holiday hunger’ and have been evaluated:
    - When and where the scheme took place
    - Who was eligible
    - What was offered including:
        - Hours the scheme operated
        - If parent/guardian were required to remain present
        - Requirement to pre-book or operated on a drop-in basis
    - Who delivered the provision including?
        - Ratio of staff to children
    - Unit costs/take-up and components of cost breakdown e.g. staff costs, premises, food, materials).

9. What factors contributed to the effectiveness or otherwise of any holiday schemes which have attempted to address 'holiday hunger' in the UK? For example:
    - Location of scheme
    - Type of scheme
    - Delivery of the scheme
    - Publicity
    - The age group of attendees
    - The involvement of wider family members
    - Strategies for ensuring the children most in need attend

Methodology

The evidence on holiday hunger and holiday learning loss was assessed according to the following search protocol agreed with the Department for Education.

Search protocol

A search was conducted in academic databases via EBSCO, University College London Libraries and Google Scholar and on publicly available web sites against the following core terms:

- Holiday learning loss
- Holiday learning loss provision
- Summer learning loss
- Summer slide (an American term)
- Summer reading/maths loss
- Holiday hunger
- Holiday hardship/stigma
- Foodbank access seasonal variation
- Food poverty/food insecurity/children
- Food insecurity impact/mental health/physical health/behaviour/attainment
- Free School meal eligibility/uptake

Each term was narrowed to the UK then broadened to scope the international literature to ensure that the widest possible literature was examined.

Literature which looked at the scale and nature of the issues and literature which described interventions to address the issues were assessed. The search included items published in English between 2004 and May 2018 about countries that are economically and culturally similar to the United Kingdom. International literature which could not be generalised to the UK situation was also excluded. For example, where the school system was very different, or the population differed from the UK, such as some evidence from South Korea. That said, US literature was often found to be informative despite some key differences such as a different welfare system, a 13-week summer break and a far more interventionist approach to supplementary nutrition.

Some papers were reviewed but found not to be relevant to the two main topics of interest. For example, Hoare & Mann's (2012) evaluation of the Sutton Trust's summer school programme for disadvantaged pupils applying to university was initially considered, but as these pupils were not at risk of holiday learning loss, the programme was not within scope of this review. In addition, overtly polemic literature, which lacked practical policy solutions, was also excluded. Ultimately, 70 items of UK literature were reviewed and 40 international items. Of these, half were included in the review.

Assessing the quality of literature

Criteria were established for assessing the quality and relevance of the available literature and evidence on this topic. The highest quality was assigned to peer reviewed journal articles reporting on research with a robust methodology (see Appendix B for the criteria used) and the lowest quality assigned to commercial web sites and journalistic sources. Because of the lack of evidence, lower quality sources were drawn on occasionally, but the majority of the evidence is drawn from peer reviewed articles in academic journals.

Holiday learning loss literature

There is a great deal of evidence about the existence of summer learning loss among low-income pupils in the United States. This is in large part related to the 13-week break in the US and the preference of better off families to use residential summer schools and camps during this time, leaving less well-off pupils behind academically. This review draws on US and other international evidence, where relevant and informative, because the evidence for holiday learning loss in the UK appears to be limited to three robust papers (Gorard et al., 2015; Campbell et al.,

2015; Shinwell & Defeyter, 2017) of which just one (Shinwell & Defeyter, 2017) is a primary investigation of holiday learning loss.

There remains a significant evidence gap for the UK because data has not been collected on pupils' attainment and achievement before and after the school holidays. However, an opinion poll of 1,031 school leaders' perceptions and views found that 75 per cent believed their pupils had lost learning over the summer holidays (The Key, 2014). The questions asked in this poll did not focus on disadvantaged pupils.

Holiday hunger literature

The concept of pupils experiencing hunger in the school holidays was discussed by Sharma & Gill (2004) and picked up more recently by the All-Party Parliamentary Group on Hunger (APPG on Hunger, 2015). The APPG on Hunger has defined four types of hunger in the holidays (Forsey, 2017):

1. Persistent or occasional hunger where there is no food at all in the house
2. Hunger experienced by parents who don't eat themselves, so their children can have the food
3. A stodgy diet of poor quality food
4. A shortage of food which means that other activities are unaffordable (p.4).

Recently several authors have investigated holiday hunger and underlying factors such as food insecurity and the rising use of food banks (eg Garthwaite et al., 2015; Mann & Defeyter, 2017; Lambie-Mumford & Sims, 2018;).

A search was also conducted for provision of holiday activity and food sessions in the UK during the school holidays. Seventeen recorded examples were found and 12 had provided sufficient information to be described in a table at Appendix A. Evidence related to this provision was of variable quality, ranging from impact evaluations carried out by university departments to websites illustrating the provision's most recent activities.

Findings Section

Holiday Learning Loss

Evidence on holiday learning loss in the United Kingdom

The concept of holiday learning loss implies a stagnation or decline in academic progress during the long school summer holidays. There is evidence from the USA and other countries that poor pupils and ethnic minority pupils fall behind their better off peers significantly during the long summer break, however evidence from the UK is limited.

In an influential study from the US, Alexander et al. (2007) used longitudinal data to follow low income pupils' academic progress across the school year from kindergarten to age 22. They found significant, lasting, seasonal differences in learning amongst low SES pupils and better off pupils by comparing test scores. Other US research has been based on the same understandings about low SES and ethnic minority pupils. For example, Chaplin & Capizzano (2006) looked at programmes designed to support low socio-economic status (SES) pupils in the US and found that those on the programme made a statistically significant one month's improvement in reading, while other poor pupils routinely lost academic progress during the summer.

It is important to note that the existence of learning loss in the US may be dependent on their lengthy – up to thirteen weeks – summer holidays. Jesson et al (2014) found that the 'summer learning effect' was 'variable' in schools serving low SES pupils across New Zealand, which has four terms and a six-week break between December and January, while in Austria, which has a 9-week summer break, Paechter et al. (2015) found that pupils lost mathematical ability, but gained in reading ability. Paechter also found that parental educational levels were a factor in reducing learning loss, which may be connected with family SES which was not accounted for in their research.

In contrast to the large body of international literature, very little attention has been paid to this potential for learning loss in the UK literature. While the attainment gap has been compared across local authority areas and over time (Andrews et al., 2017) there appears to be no evidence of the relative impact of the six-week summer break on attainment amongst different groups of pupils. Assessing the impact and extent of holiday learning loss would require bespoke pre- and post-summer tests on reading, spelling and mathematics and only one UK study measuring a small sample of pupils for summer learning loss in this way was found (Shinwell & Defeyter, 2017).

In this study, which claims to be the first to assess holiday learning loss in the UK, the authors tested 77 primary-aged pupils for spelling and reading in three schools serving low SES communities. Three tests were carried out: first at the end of the summer term, second at the beginning of the autumn term and lastly seven weeks later. The autumn scores for spelling were found to be significantly lower than the other two, confirming that for those pupils a loss of learning had taken place. The reading scores did not show any significant change. Maths was not assessed. While acknowledging the limitations of their study, the authors conclude that this loss of learning exacerbates the gap that is already apparent between low SES pupils and better off pupils by the age of three (Feinstein, 2003).

Despite the lack of rigorous research into the issue, websites advertising summer tutor services indicate that there is a common assumption that holiday learning loss is a real issue in the UK. Examples of this include Head Start Primary (2018), which has tips for parents to combat summer learning loss on its website and Pearson Publishing UK (2017), a publisher of educational materials, who blog with tips and suggestions for parents to boost educational activities in the holidays. The tips on these websites involve activities for parents to do at home rather than the sort of group interventions discussed in international academic studies.

Teachers also express concern about holiday learning loss. For example, 1,031 school leaders responded to an opinion poll of 7,000 conducted by school support service The Key in 2014 (The Key, 2014).The results indicate that 77 per cent of primary leaders and 72 per cent of secondary leaders who responded were concerned about summer learning loss in all their pupils. However, the same survey found that only 2 per cent of primary schools were offering compulsory summer catch up sessions. Forty-six per cent promoted voluntary summer reading programmes and 13 per cent offered primary children voluntary classroom-based programmes. For secondary leaders, the figures were 11 per cent, 70 per cent and 21 per cent respectively.

Poverty and the educational attainment gap

Holiday learning loss can be seen in the context of the well-documented attainment gap between better off pupils and their disadvantaged peers. For example, Feinstein (2003) found that a gap exists in attainment between better off pupils and their low socio-economic status peers by the age of three, while other research has shown that these effects persist to the end of a child's schooling at age 16 (Silva et al., 2014). While some studies have questioned the causal link with income (Blanden & Gregg, 2004), a systematic review by Cooper and Stewart (2013) found that low income is linked with worse cognitive and behavioural outcomes for poor children.

More recent research has found that the gap is closing slowly, but with significant regional variations in success (Andrews et al., 2017). There is some evidence that fewer opportunities for learning, together with insufficient nutrition during the school holidays for poor pupils, could increase the size of this gap (Child Poverty Action Group, n.d.). A combination of low income and high costs may also have an impact on children's opportunities to engage in informal school holiday learning and enrichment activities, in contrast with children from better off families. For example, Cattell & Fiaferana (2018) note the costs of essential childcare in the school holidays, so that parents can continue to work, average £134.50 per week in England and increased 5 per cent between 2017 and 2018. When it comes to outings and holiday activities, Barnardo's (Smithers, 2014) calculated that a simple day trip to the seaside could cost a family of four £172 meaning that many cultural, leisure and enrichment activities are not within the reach of poor families. Better off children are more likely to have holidays abroad and visits to attractions which could have an educational element. Parents who are struggling to afford childcare will be less able to spend time with their children during the holidays or take them out for the day.

What works to address holiday learning loss?

In the US, where there is strong evidence of holiday learning loss for low SES pupils, there are also many more evaluations of a range of interventions aimed at mitigating the situation and these are discussed below. On the other hand, there is scant and mixed evidence in the UK for academic summer schools (Martin et al., 2013; Gorard et al., 2015; Education Endowment Fund, 2018), but summer reading programmes are found to be beneficial in several countries (Kim, 2004; Kim & White, 2011; Jesson et al., 2014; The Reading Agency, 2014; Turner & Tse, 2015).

A number of international studies and reviews investigate summer reading programmes and find them to be effective in preventing summer reading loss. Easy access to books is key, as is adult support throughout the duration of the scheme. Pupils also benefit from choosing their own books with adult guidance. For example, Kim (2004) illustrated the benefits of summer reading for preventing summer reading loss in US schemes, especially for pupils from low income, ethnic minority families. He found that those that read 4-5 books over the summer had a reading score that was significantly higher than those who read fewer books. Additionally, access to books increased the numbers of books read, and so the improvement in reading score, irrespective of student background. Kim & White (2011) found that. while summer schools for pupils from low income families in the US are expensive and may not be effective, a carefully devised summer reading programme, which matches books to pupils' interests and reading levels and provides 'scaffolding'

support from teachers, significantly improved reading scores while children who received books but no support or instructions made little progress.

Similarly, in New Zealand, Turner & Tse (2015) found that well-constructed summer reading programmes benefited pupils' learning. The four programmes they studied used home visitors to monitor and support low ability readers who had made progress when later tested. The authors recognise that there may be practical and resource implications for providing home visitors, but recommend that access to books is made easier for pupils from low income families through opening school libraries and providing mobile libraries during the summer holidays. They suggest that summer reading schemes should start younger and extend for several years to obtain the best results. Also in New Zealand, Jesson et al. (2014) found that supervised reading schemes were of benefit. In their study, teachers were found to prepare pupils in different ways to continue reading over the summer holidays. Some of them promoted reading for enquiry, others for leisure. Other teachers set goals with parents and others made it a goal in the end of year school report to read more. However, the authors found that, where teachers framed the reading as a homework activity, it tended to put children off, so it was therefore better to promote reading for pleasure over the summer break,

As well as reading programmes, several US authors take an in-depth look at summer programmes to improve learning for low SES pupils. Helpfully, some of these authors list the key characteristics of successful summer programmes. For example, in a review of 13 US summer enrichment programmes, Bell & Carillo (2007) elaborated on nine characteristics which were found to be essential to a successful summer learning programme for disadvantaged pupils:

1. Intentional focus on accelerating learning

2. Firm commitment to youth development

3. Proactive approach to summer learning

4. Strong, empowering leadership

5. Advanced, collaborative planning

6. Extensive opportunities for staff development

7. Strategic partnerships

8. Rigorous approach to evaluation and commitment to program improvement

9. Clear focus on sustainability and cost-effectiveness.

The review also found that a youth work approach to learning through enrichment activities rather than an instructional model was most supportive of accelerating summer learning. The authors note that key to a successful scheme is building in continuous evaluation, beginning with clearly defined performance indicators.

Similarly, Blazer (2011) summarised evidence from US studies on the impact of summer vacations and identified the following characteristics of successful summer learning programmes:

- Affordable and Accessible
- Aimed at younger pupils
- Different content and approach from the normal school year curriculum using innovative teaching and learning styles
- Academic instruction blended with enrichment activities
- A safe place for children
- Experienced staff with degree level education
- Small class sizes
- Promotion of positive relationships
- Parental involvement
- Community Partnerships

For both of these authors, it is notable that the content needs to be somewhat different to the normal school curriculum and delivered in the context of enrichment activities.

The ‘Building Educated Leaders for Life’ (BELL) summer programme was designed to build self-esteem and academic achievement. The scheme provided eight hours a day of maths and reading education to poor and ethnic minority pupils over a five to six-week period. In a random assignment evaluation involving over 1,000 elementary school pupils who applied to BELL summer programmes in New York and Boston, Chaplin & Capizzano (2006) found that pupils gained a month’s worth of reading skills over the duration of the programme. However, other researchers recalculated Chaplin and Capizzano’s results, and found any changes to be negligible (Gorard et al., 2015). The programme was found to have no impact on academic self-perception or social behaviours (p.ii). Chaplin and Capizzano assert that parental encouragement for reading had an additional impact but do not calculate the effect claimed. Importantly, the scheme was apparently not very popular, as according to Gorard et al., 46 per cent of those allocated to the programme dropped out.

Gorard et al. (2015) also evaluated a UK summer school programme in literacy and maths for pupils in Years 5 and 6 in the UK and found some benefits to literacy of the programme and reported that teachers, parents and pupils attending the programmes enjoyed it. However, as in the BELL programmes noted above, the programme faced some difficulty recruiting participants and dropout rates were high, meaning that smaller numbers attended than planned, and more than intended were pupils from better off backgrounds. The authors note that apparently strong results for summer schools may be inflated by their voluntary nature. Those who turn up are likely to be keener to improve their learning and those who drop out are those having difficulties with the learning. These authors consider that the changes noted by their evaluation are *'not particularly secure evidence of a benefit for attainment from attending a summer school'* (p.9).

Further evidence comes from the evaluation of a 2012 UK Year 5 and 6 Summer School Programme (Martin et al., 2013). The focus of the evaluation was on readiness for secondary school and attitudes such as confidence, school readiness, and socialisation. This programme was found to be supportive in promoting positive attitudes, but the evaluation did not explore the impact on attainment.

Holiday Hunger

This section looks at the evidence on the prevalence and impact of holiday hunger in the UK in the context of poverty and food insecurity. It looks at examples of provision internationally for children who may be hungry and learns from examples of provision in the UK.

Evidence on childhood food insecurity in the UK

Prevalence of food insecurity

Food insecurity is not measured or monitored officially in the UK (Taylor & Loopstra, 2016), unlike in many other developed countries, for example the US, New Zealand, Canada, Australia and Korea (Radimer, 2002). Evidence from the UK is therefore based on qualitative data and estimates, or evidence from those such as the Trussell Trust who count foodbank visits. However, this evidence is limited as food banks do not collect data specifically about children attending, as it is adults who are issued with vouchers.

One national estimate comes from a global review for UNICEF of childhood food insecurity data, which combined nationally representative data from a Gallup poll using a Food Insecurity Experience Scale with an investigation of trends in per capita

income. In that study, Pereira et al. (2017) find that 4 per cent of children in the UK aged under 15 did not receive 3 meals a day, compared with 1 per cent in Poland and 2 per cent in Portugal.

In 2013, Ipsos Mori's social research unit interviewed a representative sample of 500 parents and 500 children drawn from across London (Ipsos Mori Social Research Unit, 2013). They reported that:

- *"Two in five parents (42 per cent) are cutting back on the amount of food they buy or the amount they spend on food.*
- *Close to one in ten (8 per cent) parents reported that, at some point, their children have had to skip meals because they cannot afford to buy food.*
- *One fifth (21 per cent) of parents in London have, at some point, skipped meals so that their children could eat.*
- *Three in ten parents (30 per cent) in London reported that in the last year they have bought less fruit and vegetables on at least a monthly basis due to the expense*
- *Many parents value and rely on free school meals, although some express concerns over stigma. This was illustrated in [the] survey, where two fifths of parents (40 per cent) reported that they would prefer to use FSM as part of a system where all children use the same payment method"* (p.16)

There is also a more recent body of literature (Lambie-Mumford & Sims, 2018; Loopstra et al., 2018) in the UK that covers families' experiences of food insecurity across the year and not just in the school holidays. Much of this literature focuses on the welfare benefits system as an underlying cause of food insecurity. The current economic situation is also said to have had an impact on the ability to buy food, with a joint report from The Centre for Economic and Business Research and Kellogg's (2017) citing the difficulties faced by families in buying food of good quality and sufficient quantity given that prices have increased faster than incomes since 2007.

The evidence above on food insecurity indicates that many families with children have a year-round challenge with consistent nutrition, whether or not they are on welfare benefits or in receipt of free school meals. This means that there will be a section of children whose families are struggling financially but who do not receive benefits. Some families are in and out of casual work meaning that their benefit entitlement fluctuates. It is difficult to assess how many of these children there may be but 'Hungry Holidays' (Forsey, 2017) estimates them to be around 2 million.

In research specifically on the costs of school holidays in Glasgow, one third of the 223 parents who responded to a non-representative survey said they found it hard to afford food during the holidays, while a quarter had skipped meals themselves to feed their children (Butcher, 2015). Similarly, in 2015, a representative opinion poll by YouGov for Kellogg's with 580 parents (Kellogg's Foundation, 2015) found that '*One in twenty parents with a household income of £25,000 or less said affording food in the holidays was a constant struggle'* (p.7).

Causes of food insecurity

There is polarised debate about the reasons people access food aid. Lord Freud has argued that increased use of food banks is related to increased supply, stating that '*food from a foodbank—the supply—is a free good, and by definition there is an almost infinite demand for a free good'* (Hansard, July 2nd 2013, Column 1072). On the other hand, Garthwaite (2016) calls the shame and stigma of using a foodbank a *'hidden cost'* (p.278) and describes the lengths that people will go to before resorting to its use, such as eating wild brambles, living off cereal and hoping to slip in unnoticed.

Despite that, the end of year statistics for the Trussell Trust (The Trussell Trust, 2018) point to a year on year increase in the numbers of visits to their food banks, although they do not specifically calculate how many relate to families with children. Their most recent records show that, in 2017-18, 0.76 per cent of referrals to Trussell Trust foodbanks were said to be for 'child holiday meals', compared to 28.49% for 'low income' and 23.74% for 'benefit delays'. Further detailed statistical analysis was conducted by Loopstra & Lalor (2017) on Trussell Trust data alongside analysis of a survey they ran with 413 food bank users across 18 sites. A stratified sample of food banks was selected by the researchers and trained volunteers at food bank were then tasked with recruiting survey participants to complete the survey on-site. Within the 18 food banks that participated, the average participation rate after excluding non-eligible clients, was 70.4%. Loopstra and Lalor's study found that families with children were the largest number of people claiming food from food banks, and their use of food banks was largely due to uncertainty about income and financial shocks. One parent families and large families are described as 'particularly vulnerable' (p. ix). Half of the people in the Loopstra and Lalor's survey had a disability which may have implications for any target groups for holiday and food provision.

In a further paper on the topic, Loopstra et al. (2018), again using Trussell Trust data, point to increased use of food banks amongst families with children, especially one parent families and those with three or more children. These authors repeatedly identify associations between the delivery of welfare benefits and food insecurity.

Others cite the recession as a challenge for families, more generally, affording food. Centre for Economic and Business Research/Kellogg's (2017) analysed food expenditure as a proportion of gross income and found that families were spending more on food but eating less and that low-income families were eating fewer nutritious food items, such as vegetables, than better off families. They found that between 2007 and 2012 expenditure on food had risen by 20 per cent while consumption declined by 7 per cent (p.12). The poorest families spent 25 per cent of their income on food. Although these families were struggling to provide healthy meals for their children, they may not have been in receipt of benefits and so not eligible for free school meals.

In research predating the widespread establishment of food banks, Sellen et al. (2002) found that 60 per cent of preschool children in newly arrived asylum-seeking families were experiencing objectively measured symptoms of hunger. It seems probable that asylum seeking families will require assistance at school holiday times. While Asylum Support may entitle pupils to a free school meal, the support payable is £37.75 per week per person in the household.

Impact of food insecurity on children: evidence from the UK and similar countries

Food insecurity – a lack of secure access to sufficient, safe and nutritious food – has an impact on children and families in the UK which affects mental and physical health, emotional wellbeing and behaviour. Although not officially measured in the UK, food insecurity is a year-round problem for affected families and is not necessarily restricted to school holidays. However, it seems likely that those affected by food insecurity at different times of the year will be those most vulnerable to being poorly nourished during the holidays.

Physical and mental health and learning

There is limited evidence from the United Kingdom on the impact of food insecurity on the mental and physical health of children and families. Although the UK has several longitudinal cohort studies and panel surveys, such as the Millennium Cohort Study, the Avon Longitudinal Study of Parents and Children, and the British Household Panel Survey,[1] there appears to have been little direct research through them on the impact of food insecurity. Belsky's (2010) analysis of UK data,

[1] http://www.ucl.ac.uk/ioe/departments-centres/centres/centre-for-longitudinal-studies http://www.bristol.ac.uk/alspac/ https://www.iser.essex.ac.uk/ulsc

discussed below, indicates that the evidence is available in British Cohort Studies for further analysis of the impacts of food insecurity in the UK.

Some authors have examined the links between parents struggling to manage on benefits, experiencing mental health problems, and the potential impacts on children. For example, in an ethnographic study of foodbank use in Stockton-on-Tees, Garthwaite et al. (2015) found that mental health problems were a prevalent underlying factor for families seeking help from food banks, in addition to the commonly reported problems with benefits. For some of the participants in this study, the current fortnightly distribution of Job Seekers' Allowance and Employment and Support Allowance presented a challenge for obtaining regular supplies of fresh food. Lambie-Mumford & Sims (2018) note that children's experiences of hunger are closely connected with the experiences of their families, so that parental health and mental health issues and difficulties managing finances would impact on children's access to food.

Further UK evidence comes from the Environmental Risk Longitudinal Twin Study of 1,116 same-sex twins born in 1994-1995 in England and Wales. Using this study, American academics found that children in food insecure households experienced more emotional and behavioural problems and lower IQs than children in food secure households (Belsky et al., 2010). They also found that, in food insecure households, mothers were less sensitive to children's needs and had more anti-social tendencies in their personalities, while children were more likely to experience depression and anxiety. This supports earlier research by Whitaker et al. (2006), who found increasing levels of depression and anxiety in food insecure mothers and higher levels of behaviour problems in their children in a US cross-sectional survey of 2870 mothers of three-year old children.

Further evidence comes from the Southampton Women's Survey, a prospective cohort study of 3,000 women who became pregnant between 1998 and 2003. Researchers conducted follow-up interviews with 1,618 families when the children were 3 years old (Pilgrim et al., 2012). Using the USDA Household Food Security Scale, the follow-up survey found that 4.6 per cent of the households were food insecure and that these families were concentrated in areas of high material deprivation according to the Index of Multiple Deprivation (IMD). In comparison with other 3-year-old children, those in food insecure households were likely to have worse parent-reported health and a poorer quality diet, in particular '*energy dense, micronutrient poor'* food. Such a diet would have implications for their longer term physical and health development.

There is abundant evidence from North America on the impact of food insecurity on the mental and physical health of children and families. Much of the US and Canadian evidence is based on longitudinal studies using regression analyses.

In Canada, where there is no national free school meals programme, Ke & Ford-Jones (2015) found, in a brief review of longitudinal and public health data, that children experiencing food insecurity experienced reduced learning, thought to be due to iron deficiency, as well as more depression, more chronic diseases such as asthma and greater incidence of overweight status. Similarly, a study of longitudinal data by Kirkpatrick et al. (2010) found poorer health among Canadian children experiencing hunger, especially those that have experienced multiple episodes of hunger. Jyoti et al. (2005) also found that food insecurity, especially persistent food insecurity, had an impact on social skills and academic attainment. All of these authors found that the adverse effects of chronic food insecurity had greater and longer lasting impacts on girls. In a longitudinal study in the US, Ryu & Bartlett (2012) found that while food insecurity was usually a transient circumstance with few lasting ill-effects, chronic food insecurity was associated with poor health outcomes.

Reinforcing the UK evidence above, US evidence also finds an impact on mothers who attempt to manage the situation of household food insecurity so that their children do not go short of food. Using panel study data Martin & Lippert (2011) explored the strategies used by food insecure mothers in the US. Mothers prioritise the children's nutritional needs over their own to protect their children from hunger and Martin & Lippert find that those mothers are more likely to be overweight than fathers or child-free women in similar circumstances. This is because low cost food, which is nonetheless filling, is likely to be high in calories but deficient on nutrition.

Effects of holiday hunger in a UK context

This section of the report examines the evidence on the potential effects of food insecurity in the school holidays, so-called 'holiday hunger'. Sharma & Gill (2004) appear to be among the first authors to address the issue of the potential impact which a loss of access to free school meals has on families in the UK during the school holidays. In a report based on a review of literature and a small number of interviews with parents in the south-west of England, the authors place the issue in the wider context of child poverty. They identify three factors that impact on families:

- Having less money in the school holidays because of having to pay for additional meals
- Financial pressure meaning that families buy poor quality food

- The impact of extra expenses which mean that holiday activities like swimming or going somewhere on public transport is harder to afford

Sharma and Gill's review of literature indicates that there will be significant impacts on health outcomes including malnutrition and obesity from periods of food poverty and conclude that if the official view of free school meals is that they are essential to health and wellbeing, then their absence must have an equally negative impact.

In Scotland, Butcher (2015) conducted six focus groups with adults, three with children and a non-representative survey with 223 parents, to investigate the situation for poor families in Glasgow during the school holidays. She found three key pressures on families:

- Cost pressures including from the loss of FSM, but also buying new uniform and paying for child care
- Difficulties finding and funding child care
- Emotional pressure, especially guilt for parents, about not affording holiday activities

What is the current state of UK holiday food provision?

Provision for children experiencing hunger in the school holidays is ad hoc, piecemeal, informal and largely run by local charities and volunteers. Provision is also limited: in 2015, the APPG on Hunger (APPG on Hunger, 2015) highlighted 15 local providers all offering something different in terms of numbers, hours and activities. More recently, Mann & Defeyter (2017) conducted a nationwide survey of school holiday clubs in general, distributed via the membership base of the APPG on Hunger. They received 837 responses of which 593 organisations provided holiday clubs to school aged children. Of these, the largest proportion of respondents to the survey were based in the North East, (18 per cent) followed by London (13 per cent), although this may reflect the fact that the researchers are based in the North East of England, rather than actual geographical spread. Fifty-six per cent of clubs were run by a voluntary organisation, a church or a food bank and 52 per cent charged up to £5 per session. Ninety-two per cent of the respondents were providing food, mainly lunch, and the authors note that there was a sharp increase in the proportion reporting that they offered food during 2017. Twenty-one per cent of the clubs were staffed by volunteers only, although 54 per cent used a mix of paid staff and volunteers to deliver the service.

Searches conducted as part of this review identified 16 projects which either published details online or had an evaluation, eleven of which had useful

descriptions. There were wide variations of offer, but they were mostly run by volunteers, using free food, voluntary funds and free premises.

The diverse availability of this mainly free resource means that current provision is not likely to be sustainable year on year. Where there was local authority funding this had to be applied for year on year and financial pressures on local authorities are always said to be increasing. The lack of evaluation, impact assessment or costing for many of these projects will affect their ability to apply for grants in the future.

Lambie-Mumford & Sims (2018) identify four particular risks (p.4) associated with this provision as it is currently constituted:

- Inaccessibility—opening hours may be short and variable or there may be a cost involved
- Unreliability—as they rely on volunteers and availability of free premises they do not run continuously over the required period
- Unaccountability—ad hoc voluntary provision is not overseen nationally
- Socially unacceptable—targeted services are stigmatising

What is the evidence on effective provision?

This section draws on the 17 examples identified, (especially the 12 with reasonable descriptions[2]) to ascertain what may be successful and sustainable, and any barriers to effective provision.

However, the information made publicly available on holiday clubs providing food and activities to counter hunger in the school holidays is minimal, vague and inconsistent. Only a few of the services have had an evaluation and, even in these cases, no consistent model of evaluation has been used, so comparisons about effectiveness are not accessible. The results of this research are consistent with those who described provision in the UK as ad hoc, unsupervised and unreliable and offering sporadic cover (Forsey, 2017; Lambie-Mumford & Sims, 2018).

A diverse range of provision, models and providers

As shown below there is a diverse range of models of provision (see Appendix A). There is extensive variation in opening hours, targeting and activity levels. There were also various methods for funding services. This diversity is summarised below

[2] See Appendix A

before moving on to a more in-depth review of providers where an evaluation is available.

Delivery styles

Involving families and other age groups is an important element for several such as Food and Fun which is a holiday enrichment programme run by the Welsh Government across Wales and Holiday Kitchen in the West Midlands. Holiday Kitchen ran a structured programme of meals and activities for children during the summer holidays and is run by social housing provider Ashram in a range of settings including schools, community centres and youth clubs. In St Helen's and Wigan some provision adopts a drop-in 'bistro' model for all age groups, giving an opportunity to enjoy food and social or cultural activities, such as talks and music, while other provision is just for children in the holidays. The motivation for the all-age bistro model was to reduce stigma for all service users whatever their age.

Some services such as Make Lunch or Kellogg's simply provide lunch or breakfast, but others, including Fit n Fed, offer other activities and sports to the children. Holiday Kitchen has an element of communal food preparation to spread information to parents and children about shopping for and preparing nutritious meals at low cost.

Funding practices

There are a range of ways to fund provision currently, for example Fit n Fed and Family Action have grants from large food and soft drink companies including Brakes, Innocent, Kellogg's and Coca Cola. However, largely, the impetus is charitable with local volunteers and fundraising to offer a service to a local community. Rarely, a local council funds the provision, for example, in Sheffield (Sheffield City Council, 2017) and Derbyshire (Derbyshire County Council, 2018). Despite having council funding the service covering Derbyshire obtained the food from Fare Share. Forsey (2017) recommends that *'the voluntary sector should be in the driving seat wherever possible'* (p.7) as this allows for the greatest flexibility in responding to local need.

An alternative, more corporate, approach is taken by Make Lunch which is a large UK wide enterprise, which offers a social franchise model at a cost of £240 to each provider who are often church or community groups. This pays for branding and marketing (which are key to promoting participation) and menus (which assure quality across all providers). There is an additional cost of £500 for food safety training and certification. The provision is then run by volunteers in community premises, usually in churches. Some micro grants are also available through Make

Lunch and large, or local, food companies such as Innocent and Belazu are providing small grants and food and snacks.

Evaluated projects

This section discusses the providers who had been evaluated and therefore provide the most information on best practice and, sometimes, value for money for this review. Reviewing the projects for which records and evaluations are available, together with other examples of provision such as Make Lunch's and Kellogg's web sites, it would seem that services which provide consistent, easily accessible enrichment activities for more than just lunch or breakfast, and which involve parents and children in the preparation of food are those which work best. Three outstanding examples are Food and Fun *(McConnon et al., 2017)* and Holiday Kitchen *(O'Connor et al., 2015) a*nd 'A Day Out, Not a Hand Out' (Defeyter et al., 2018). These three projects had thorough and robust evaluations that describe an effective service in each case and are among those discussed below.

A Day Out, Not A Hand Out

'A Day Out, Not A Hand Out' is a large holiday provision in the North East of England with a detailed and robust evaluation (Defeyter et al., 2018). The authors combined quantitative and qualitative methods to evaluate 17 clubs across 4 local authority areas run by the North East Child Poverty Trust. The scheme was funded by The Big Lottery Fund to deliver between 16 and 29 days of holiday activity and food during the 2017 summer holidays. The authors held interview and focus group sessions for parents, children and staff, as well as using standardised questionnaires to track wellbeing and health outcomes. This resulted in data from a total of 606 participants.

These successful programmes offered a wide and diverse range of activities to children and their families with a focus on nutrition and healthy activities as well as having fun. Children helped to shop for and prepare food in some clubs. Some educational input was provided in some of the clubs to improve confidence for the new school year in September. English as an additional language was also offered to some parents and children in certain locations.

The authors found that children's diets and activity levels improved on club days compared to non-club days and parents were very positive about the impact of the clubs. Staff felt that while all children who attended benefited from the provision, vulnerable children gained the most from the club. The clubs were usually free to attend, but it is not apparent how much the funding was or what it cost to deliver. In terms of improving participation and recruitment, the authors note that some parents had found out about the clubs by accident and advise that *'Importantly, friends form*

the basis for existing networks of children at the club and are highly important for advertising clubs' (p.71).

Food and Fun

Food and Fun in Cardiff had an informative, costed evaluation. Accounting for the average number of children in attendance over the 12-day period, the unit cost of providing a school-based Food and Fun project is £30.71 per child per day (McConnon et al., 2017). Food and Fun was delivered by 49 external organisations working in partnership with the Welsh Government in 10 school premises. Twelve days are offered across either a three- or four-week period with a breakfast, lunch, one hour of physical activity and education about nutrition. Family members can join children for lunch one day per week. Other activities were offered in addition to the core element according to local needs and these activities were planned by local staff. Some activities were delivered by parents and carers.

Families appreciated the familiarity of using school premises, for example children understood where the toilet was and were familiar with the canteen. Schools provided teaching assistants (TAs) to deliver play work and physical activity and nutrition training. How TAs were paid and by whom was not clear. The authors recommend using school facilities because sports and kitchen provision are of a high standard that meets regulations.

Forty-seven per cent of the 323 children attending in 2016 were classified as deprived. (Welsh Local Government Association, 2017; McConnon et al., 2017). The evaluation of Food and Fun provides a costed table of each of the 10 sites and includes costing for in-kind elements (p.14) so volunteers, free premises and so on are accounted for.

Holiday Kitchen

In the West Midlands, Holiday Kitchen had a theory of change evaluation with one provider undertaking a partial (with no inputs) assessment of the social return on investment (SROI) (O'Connor et al., 2015). A range of models of provision were associated with Holiday Kitchen. It was delivered by Ashram Housing in 11 centres for a total of eight days in low income areas. Food was provided by caterers with guidance about nutrition. At the Youth Centre, the young people made their own lunches. In general, self-catering with core ingredients was preferred as more educational for children and families.

To maximise participation, a referral system was used including a strong relationship with a Domestic Violence Refuge. Provision held at a Youth Centre used Facebook, police referrals and outreach to attract participants. As with other providers,

managers noted that recruitment of participants was lower than hoped and this was attributed to a lack of lead time for marketing.

The evaluation found that, after participating in the programme, 50 per cent of families felt able to feed their family more healthily and children helped with duties like washing up as well as food preparation. The SROI for one of the programmes associated with Holiday Kitchen demonstrated a financial proxy of £348 for improved nutrition for the children attending. Inputs were not costed for this SROI so it is not possible to state the cost of delivery.

Mayor's Fund – Kitchen Social Hub

An evaluation for The Mayor's Fund Kitchen Social Hub in London Boroughs is informative. The average cost of running each club is over £2,000 approximately. Evaluators were critical that the true costs of senior management time and other resources had not been taken into account in costing and grant making for the services (Mayor's Fund for London, 2016).

Kitchen Social Hub piloted provision in schools delivering breakfast and lunch for a minimum of twelve days over the six-week holiday, with a maximum of four days provision per week. Parents and carers could have lunch once a week. Food education activities and literacy and numeracy extension activities were provided. The evaluation found that involving children and parents and carers in food preparation and activities was beneficial. Volunteers were heavily involved in planning and delivery and needed more support and training.

Services were targeted in most cases and 60 per cent of pupils on FSM were recruited. Some providers found targeting this potentially stigmatising and, in some cases, targeting was abandoned as recruitment numbers would otherwise have been low. Marketing and recruitment took longer than expected and the evaluators recommend a referral strategy through schools and social services for example. Set up times were considered too short to maximise participation of at risk children and families

This evaluation concluded that schools were difficult to engage as sites to deliver provision due to the bureaucracy involved, so other premises should be considered. Local authority partners were difficult to work with as it is not clear what department should be providing the support. This is in contrast to the positive findings about working with schools for Food and Fun in Wales.

Feeding Derbyshire

In Derbyshire, holiday provision is part of a £500,000 public health project called 'Feeding Derbyshire' which includes food banks, soup kitchens and breakfast clubs. The total allocation for six weeks' school holiday provision in 2017 was £11,818 which provided 8,324 meals, a unit cost of £1.41. Food was provided for free by Fare Share and 180 volunteers and 160 partner organisations were associated with 31 projects around the county (Derbyshire County Council, 2018). Premises used included schools, churches and community centres. This is the only evaluation to pay attention to safeguarding and health and safety, including emergency procedures and insurance (Hicken et al., 2016, p.7). This evaluation acknowledges the time and expense needed to ensure a safe service. Their key learning for safety includes:

- Suitable risk assessments,
- Safeguarding and child protection procedures.
- Qualified, suitable and competent staff.
- Emergency procedures (e.g. first aid, missing children, child not collected by parent, fire emergency procedures, etc.)
- Insurance cover (p7)

Healthy Norwich

A simple evaluation conducted by Healthy Norwich (Healthy Norwich, 2016) for the local Food and Fun programme in 2016 showed that a low-key pilot project over six four-hour sessions catered to 57 children and their parents. Children and parents agreed they were eating more healthy food. There was a waiting list for attendance an indication of a high level of demand. Food and Fun Norwich managed by having the council's usual free school meals provider cater the services free of charge. They also had funding from the Jamie Oliver Food Foundation

Key messages from evaluations

The key messages in common to the projects that have been evaluated are:

- Staff and volunteers must be involved in planning
- A strong partnership approach with different organisations working together is the most successful
- There can be a core element, but local flexibility is important
- Knowledge sharing between centres and partners is beneficial
- Families and parents can be involved to everyone's benefit

- Centres which invite families to meals allow for advice to be given on other topics such as benefits, housing and relationships
- Much more attention needs to be paid to marketing with sufficient lead times to attract participants

Limitations of provision

Few of the services described above appear to provide enough food over a long enough period to resolve situations where children are at risk of malnutrition due to food insecurity in the holidays. This is line with the findings of (Lambie-Mumford & Sims (2018) on the ad hoc and sometimes unreliable nature of provision and with the findings from Forsey (2017) on the limitations of provision and the need for some formal strategic support.

The full implications of running a holiday activity and food programme are rarely considered, so that key management information about costs, hours, staffing or strategic considerations are missing from most accounts.

In particular, very little has been recorded on the cost of providing holiday food and activity services. Traditionally, services are being provided ad hoc in communities by voluntary organisations and religious bodies as a charitable act and staffed by volunteers. There is some association with food banks and, in some cases, food is provided for free from food waste management organisations such as Fare Share. Providers use existing church, school, mosque or other community premises, often free of charge. Grants may be available from big food companies including some soft drinks manufacturers.

Most providers seem unable to say how much it costs to provide a consistent reliable service. While several services attempted a partial account of expenditure and receipts these costs cannot be compared because not all the providers have given the number of service users or details of the times when the service was open or the numbers of meals served. There are risks associated with this lack of management information. For example, in an evaluation of Kitchen Social Hub in London (funded by the Mayor of London), the project was found to be underfunded with providers subsidising the shortfalls (Mayor's Fund for London, 2016).

Unit costs which can be calculated, or which are provided in documents, vary widely from £1.41 to £30.71. For example, Sheffield Council provided a service to 1,600 children at five locations for £30,000—a unit cost of £18.75 (Sheffield City Council, 2017) while a needs assessment of provision in the London Borough of Greenwich proposes a cost of between £2.30 and £3.00 per head with higher costs for after school clubs (£7.20) (Green & Burroughs, 2015). The difference is probably

explained by the varying degree of reliance on voluntary or free contributions, or a potential neglect of key components such as insurance. The highest unit cost is for Food and Fun in Wales (McConnon et al., 2017) which includes ‘costs in kind’, in other words, the volunteers, the council employees, and free premises. None of the services assessed for this review considered overhead costs, for example rates or energy costs. Only one mentioned insurance. It is not clear how staff were to be paid in any of the examples found.

There are some necessary expenses in running a safe food delivery service for children, even with volunteers, which are rarely mentioned, such as Disclosure and Barring Service applications, public liability insurance, and the costs of meeting food hygiene regulations.

A formalised holiday provision service would need full management information on costs, staffing, premises, management and more consistent planning for delivery than has been found in most of the services described here. Reliance on free premises, volunteers and waste food mean that actual costs are hidden and, effectively, these services are subsidising a need that merits serious attention.

What can we learn from breakfast clubs?

Although not specific to holiday provision, there is a developing evidence base in the UK on breakfast clubs, which can be drawn upon to inform school holiday food and activity clubs.

For example, Defeyter et al.’s (2015) small-scale (N=50) qualitative evaluation of a Kellogg’s school holiday breakfast club found that children attending the club were given a positive social outlet and encouraged to eat more healthy food. Their findings about encouraging children at risk to attend are informative. They note that there was concern amongst breakfast club staff about over-refined targeting of the club in a way that could be seen as stigmatising. Staff suggested that a small charge might mitigate this and attract more pupils to the club. The authors found that participation was improved if the setting was neutral such as a park facility or community centre rather than a church or school. Food banks were felt to be stigmatising locations for delivery. Although most breakfast clubs are now free for all these early findings can be generalised to the holiday food and activity setting

The social benefits of breakfast clubs were also identified in a study by Graham et al. (2017). It found that breakfast clubs encouraged and developed social skills through having pupils eat together and sit with older pupils and adults. Attendance provided the opportunity for socially reserved pupils to develop confidence through eating with and speaking to staff and other pupils. For similar reasons, the US Department of

Agriculture Food and Nutrition Service promotes what are referred to as *'congregate meals'* (USDA, n.d.). These findings about the pro-social effects of eating together are likely to also apply to holiday provision.

Similarly, in their evaluation of Magic Breakfast's school term-time provision, Crawford et al. (2016) found that there were social benefits beyond eating breakfast itself. In some settings, the existence of a breakfast club in a school raised standards even amongst children who did not attend the club. This evaluation found that Year 6 pupils attending a breakfast club made about two months' worth of academic progress, much of which could not have occurred by chance and that teachers assessed that behaviour improved in breakfast club schools. Because the classroom environment improved with better behaviour, pupils benefited even if they did not attend the breakfast.

Lessons to be learnt from the USA

Although evidence from evaluated projects in the UK is limited, the United States has a long tradition of providing food aid to disadvantaged families and children as part of its welfare provision (Kennedy & Cooney, 2001). This section highlights key findings from US research that could provide lessons for UK provision.

The US evidence base has developed over more than a century and is now overseen, monitored and evaluated by the United States Department of Agriculture Food and Nutrition Service (USDA). The following programmes are administered by states on the behalf of USDA:

- National School Lunch Program
- School Breakfast Program
- Child and Adult Care Food Program
- Summer Food Service Program
- Fresh Fruit and Vegetable Program
- Special Milk Program

Of most interest to this review is the Summer Food Service Program, which provides food to low-income children outside of term time. There are two versions:

- The Seamless Summer option which provides food in schools throughout the year to those children entitled to the National School Lunch Program (NSLP) and the School Breakfast Program.
- The traditional Summer Food Service Program which provides specially sponsored summer only food and activity programmes for children at a range of locations and providers.

The USDA prescribes food and nutritional standards, accounting and management protocols and the areas in which sites can be set up (usually at least 50 per cent of the local children must be on NSLP) and either programme can be delivered by an approved sponsor.

USDA publishes frequent evaluations and advice packages on delivering this programme and it is closely evaluated for impact, as well as monitored for standards and accountability, including financial accountability. USDA also prescribe food and nutritional standards to providers and test and publicise innovations, for example, the electronic transfer of funds, or new methods of delivering food to children in poor households such as through backpacks. These 'Demonstration Projects' are evaluated in detail to inform providers. (U.S. Department of Agriculture Food and Nutrition Service, 2013). For example, in the Backpack Program, backpacks of carefully selected foods are sent home to children on days when they do not participate in a '*congregate program'* (p.3). A web site (U.S. Department of Agriculture Food and Nutrition service, 2013) is provided to show what different State providers are offering which meet the standards and approval of USDA. A variety of organisations offer a diverse range of activities including: outdoor activities, reading schemes, safety and confidence building, careers advice, promoting peace and non-violence, cultural learning and visiting older people to eat with them.

Because of the extensive and objective data collected by USDA on food insecurity and on the impact of services to tackle it, including the Summer Food Service Program, academics are able to conduct robust analyses of these topics. For example, Nord & Romig (2006) were able to determine accurate seasonal variations in demand for food from children in deprived areas. This information based on regular measurements of food security allow for efficient planning and delivery of services.

The extensive oversight which USDA has over sites nationwide allows the sharing of tips and best practices online and these range from Integrity and Fiscal Accountability to Rural Feeding (U.S Department of Agriculture Food and Nutrition Service, 2017).

In a report entitled *170 days* (the number of non-school days in the UK school year), UK researcher Lindsay Graham (2014) visited 11 projects in nine US States to see how the Summer Food Service Program was interpreted to serve the particular local needs in each case. Graham describes the two separate programmes: Seamless Lunch which is a continuation of the NSLP throughout the year and traditional summer meals which are provided in sites such as church halls and community centres. Numerous voluntary and community organisations are involved in delivering programmes on behalf of each State reporting to USDA. Given the high degree of

accountability and monitoring required by USDA there is nonetheless evidence of flexibility and responsiveness to local needs. The State reimburses providers at a rate of £2.20 per lunch (p.8). Some of the programmes visited by Graham were mobile and therefore able to deal with widespread, remote rural communities. Graham makes some key recommendations based on her observations:

- Programmes should be targeted at areas with more than 40 per cent free school meals
- One Government Department should oversee delivery
- Programmes should run in all school holidays using existing staff (assume school staff, but she does not specify)
- Learning, sport and enrichment activities should be included

A key finding from Graham's research in the US is that projects should be evaluated from the inception. She says *'Projects should be set within an evaluation framework … which measures both process and impact and learning should be shared and disseminated nationally and internationally'* (p.21). It has been a challenge for this review that current provision is frequently inadequately evaluated and little is offered in the way of costing, impact, or design rationale, for example, why any particular model of provision should be favoured over another.

Encouraging participation in holiday provision

A key factor in making holiday provision, or any club, effective is to ensure attendance is high, particularly among the right people. This section summarises evidence on encouraging participation.

The US Department of Agriculture's tips on recruiting children and increasing participation in a Summer Food Program (U.S Department of Agriculture Food and Nutrition Service, n.d.) stress the importance of word of mouth from contented children, verbal presentations to communities, as well as calling door to door. This evidence is supplemented by Cassady et al. (2006) who demonstrated that simple promotions such as competitions and a free breakfast for parents were most successful at promoting a free breakfast club to pupils. Involving parents had the most significant effect and represented value for money in terms of marketing.

UK evaluations of breakfast clubs provide important information for encouraging attendance. In the North West of England, Defeyter et al. (2015) found that Holiday Breakfast Club staff would have liked more time to promote the club to encourage attendance and some staff felt that a small charge would reduce stigma. While in another evaluation of school term breakfast clubs, when targeting older pupils, it was found best not to use the phrase "breakfast club" as this was seen as 'uncool'

(Graham et al., 2017). While Crawford et al. (2016) noted that encouraging and promoting the breakfast club to parents at school increased participation, a challenge for summer holiday programmes will be to reach parents who do not know anything about the provision because it takes place away from school.

Many authors do not favour targeting too closely. For example, Stretesky et al. (2017) conducted a small survey of 38 parents in 7 holiday clubs and found that 42 per cent were food insecure using the Household Food Security Scale[3]. While these authors recommend that household food security is assessed for all those who attend the clubs to improve reach to those most at risk, they warn against segregating food insecure pupils in special provision as this may result in stigma. Similarly, Lambie-Mumford & Sims (2018) note the stigmatising potential of targeted provision: *'Particularly if they are targeted at 'hungry' young people, there are significant implications for children's experiences of social exclusion, embarrassment and stigma all of which are acutely felt by children'* (p.4).

The key activities for encouraging recruitment and participation identified in the reviewed literature are:

- Word of mouth from happy service users
- Familiar but neutral delivery sites
- Local recommendations from community figures
- Time to engage local populations before the club opens
- Taking referrals from other agencies such as food banks, health visitors, social workers, refuges or police
- Using social media to encourage older young people
- Involving parents and inviting them to some meals and activities
- Broad, rather than refined, targeting to avoid stigma, and to engage families who may be struggling, but who do not see themselves as poor.

Identified evidence gaps

This review has uncovered several key gaps in evidence about UK children's experiences of either holiday learning loss or holiday hunger.

[3] https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/#household

The three main evidence gaps are:

- The extent of holiday learning loss.
- The extent of food insecurity among UK children.
- Evaluation of, and management information about, provision to address both issues, but especially holiday hunger.

Holiday learning loss

A significant evidence gap exists in the UK literature about whether holiday learning loss occurs, who it affects and how it can be addressed. To find out whether pupils have lost significant learning after the summer holidays potentially involves an additional phase of testing, as the evidence tends to be anecdotal (Explore Learning, 2017). Pupils are currently tested in the summer at the end of Key Stages 1 and 2. To establish an evidence base there needs to be rigorous testing before and after the school holidays such as carried out by Paechter et al. (2015) and Shinwell & Defeyter (2017) and Gorard et al. (2015) but taking note of the authors' views of the limitations of their own studies. Sample sizes would need to be larger and a better understanding of pupil demographics obtained. This would support evidence for the extent and impact of holiday learning loss. Note that Paechter et al. (2015) were critical of American studies which only tested once in the autumn, advising follow-up testing later in the year. They tested pupils again nine weeks after the start of the autumn term and Shinwell & Defeyter (2017) tested again after seven weeks.

Amongst the extensive international evaluations of summer schools and other interventions, the strongest evidence for effective interventions to address holiday learning loss is around summer reading schemes. Evidence from US and Australasian literature indicates that managed summer reading schemes have a beneficial effect on learning loss, and The Reading Agency (2014) found positive results for the Summer Reading Challenge organised annually through local public libraries, with outreach to rural areas and traveller sites. Butcher (2015) found in her survey of 223 children in Glasgow that 46 per cent spent some time in the library during the summer holiday and spoke positively about the Summer Reading Challenge which encouraged them to stretch their reading. More work could be done on evaluating and extending schemes like these which provide low-cost enrichment and literacy activities for pupils in the summer. The findings of Bell & Carillo (2007) on the importance of building in rigorous evaluation and improvement into a scheme is informative here.

Understanding food insecurity in UK children

Holiday hunger is intimately related to food insecurity across the year. Families report that the lack of free school meals in the summer holidays has an impact on their finances and this would seem to indicate that even during term time managing to buy sufficient nutritious food may be a problem.

An objective, official measurement of the extent of food insecurity in the UK would avoid reliance on data collected by charities and other agencies and individuals. Officially collected data would avoid debate about whether figures are accurate and whether food charity use represents a real need or an artificially created demand. The needs of children should be included in the data and collection should be quarterly to capture seasonal variation in need. A validated and respected scale for measuring household food security is the Radimer/Cornell Scale (Welch et al., 1998) used in the US as the USDA Household Food Security Scale (United States Department of Agriculture, 2017).

The UK's longitudinal survey cohorts, such as The Millennium Cohort Study, offer an opportunity for research into the impact of food insecurity on children's life course, similar to research that has been carried out North America.

Evaluating Provision

In part because of the ad hoc nature of provision, only two robust evaluations could be found on holiday provision to date: O'Connor et al. (2015) and McConnon et al. (2017). Future holiday food and activity pilots should have evaluation and impact assessment built in from the inception of the project. There is much to be learnt from the approach in the United States to monitoring and evaluation, and evaluations like those on breakfast clubs by Crawford et al. (2016), Defeyter et al. (2015) and Graham et al. (2017) offer detailed learning about what a good evaluation might consist of, offering between them impact, process, framework, and theory of change evaluations (Parsons, 2017). Ongoing evaluation demands robust management information and this should be collected from the inception of any formalised service.

Conclusions

The evidence on addressing holiday learning loss and holiday hunger indicate that the following conclusions should be noted.

Holiday learning loss

1. There is no conclusive evidence on the extent of holiday learning loss. Determining true extent would require a robust programme of research which tests pupils before and after the school holidays with a further test at the end of the autumn term to follow up.
2. The most promising programmes for addressing holiday learning loss are summer reading schemes, especially those which have adult guidance and support built in.
3. US evidence suggests that a combination of enrichment activities and academic instruction offers the best support to pupils at risk of learning loss and that provision should have experienced, well-qualified staff.

Holiday Hunger

1. Participation at holiday activity and food provision can be encouraged by 'word of mouth' recommendations, verbal presentations to communities and calling door to door. Involving parents and carers can encourage participation and represents value for money in terms of marketing, while promotions such as competitions and free food for parents and carers have also been found to be effective in some programmes.
2. Inviting parents and carers to participate means that information can be provided about nutrition, housing and welfare. Whole family cooking activities benefit families in understanding how to make the best of low cost ingredients as well as being fun.
3. It is important to avoid stigma. As noted by the Derbyshire school holiday food programme, the term Holiday Hunger is stigmatising to families experiencing hardship and should not be used when delivering provision. Close attention should be paid to the stigmatising effects on children, and parents and carers, of provision which is too closely targeted (Garthwaite, 2016; Lambie-Mumford & Sims, 2018).
4. Targeting should be broad rather than refined and neutral settings can aid participation: for example, facilities in parks or community centres rather than a church or school. Food banks were felt to be stigmatising locations for delivery.
5. The greatest proportion of pupils on free school meals are those in Special Schools (35.7 per cent) and Pupil Referral Units (40.0 per cent). In addition, the evidence on food insecurity shows that a higher incidence of mental, emotional and physical health problems occurs amongst children and young people who are food insecure. The staffing of holiday food and activity

provision needs to reflect the probability of a higher level of special needs and challenge in the targeted groups.

6. Evidence on food insecurity shows that children are affected emotionally and socially by a lack of food in the household even if they themselves receive sufficient food due to management of resources by the adults. Provision for children from food insecure households should include support for families as a whole especially in the light of the evidence to show that involving parents improves participation.
7. Polemic debate could be minimised through the objective collection of official data on food insecurity and its impacts.

Effective holiday activity and food provision

1. Provision for children experiencing hunger in the school holidays is ad hoc, piecemeal, informal and largely run by local charities and volunteers. However, there is also evidence that this informality may allow for some flexibility and sensitivity to local contexts.
2. Evidence on effective holiday provision in the UK is limited, but some suggests that services which provide consistent, easily accessible, enrichment activities beyond just lunch or breakfast, and which involve parents and children in the preparation of food are those which work best.
3. Centres which invite parents and carers to meals allow for advice to be given on other topics such as benefits, housing and relationships.

Appendix A Table of Information about Providers

Name	Location	Description
A Day Out, Not A Hand Out	North East England	17 Big lottery funded clubs provided over 4 local authority areas for between 16 to 29 days over the school holidays. A wide range of activities including gardening, cooking, academic input and fun activities are provided in various ways across the different clubs. 7418 meals provided in 2017
Food and Fun	Wales	Food and Fun is funded by the Welsh Government and runs 38 clubs in 12 local authorities and 7 health boards. Food, nutritional education and physical activity are provided together with enrichment activities for 12 days over a 3 or 4-week period. The service is costed at £30.71 per child per day. The service is targeted on areas of social deprivation
St Helen's Council	North West	St Helen's council provides a universal service for adults and children. Lunch is provided for children in churches and community centres at various during the holidays. The duration of the scheme or activities are not available. The council made a £7,500 grant for holiday provision
Sheffield Council	Sheffield	This scheme was piloted with Voluntary Action Sheffield. It served 5 locations in areas with high child poverty and served 1,600 children using a £30,000 council grant. The unit cost per child per day was £18.75

Feeding Derbyshire	Derbyshire	School holiday provision is part of a £500,000 public health project called 'Feeding Derbyshire' which includes food banks, soup kitchens and breakfast clubs. The total allocation for six weeks' school holiday provision in 2017 was £11,818 which provided 8,324 meals, a unit cost of £1.41. Food was provided for free by Fare Share and 180 volunteers and 160 partner organisations were associated with 31 projects around the county Premises used included schools, churches and community centres
Kitchen Social Hub	London Boroughs	The scheme provided breakfast and lunch for a minimum of twelve days for a maximum of four days a week over the six-week holiday. Parents and carers could have lunch once a week. Food education activities and literacy and numeracy extension activities were provided.10,800 meals were provided to 1728 children and young people. No costings are available
Holiday Kitchen	West Midlands	This service was targeted through housing associations to areas of high deprivation. It ran in 11 centres for a total of eight days. A referral system was used as one of the recruitment methods with a strong relationship with a Domestic Violence Refuge. Self-catering was encouraged to improve nutrition education. No costs are available.
Food and Fun Norwich	Norwich	A pilot project in 2016 over six four-hour sessions catered to 57 children and their parents in areas of high deprivation. There was a waiting list

		for attendance an indication of a high level of demand. The usual school caterers provided services free of charge. No costs available.
Fit and Fed	7 Local Authorities	Delivered in poor neighbourhoods to provide food and sports activities to 19 projects in the school holidays. 6000 children reached with an ambition to reach 7,500 in 2017. No information available on duration, hours or costs.
Family Action Holiday Hub	10 locations in England	Whole families learn about nutrition and keeping fit as well as nutritious foods and activities to raise life aspirations. Funded by Brakes. No costs available.
Make Lunch	UK	Make Lunch is a major provider of holiday lunches operating a social franchise model and delivering mainly through churches. Providers are supported with branding, marketing, food hygiene and menus. The royalty fee is £240. The organisation claims to feed 6% of children on FSM in the school holidays
Club 365	North Lanarkshire	Provides food to local children all year round. No details of cost or take up as yet.

Appendix B Quality Criteria

Quality of evidence	Type of evidence	Useful for:
	Meta Analyses and RCTs	Insights into what works based on large scale systematic evaluation and experiment
	Articles in peer-reviewed journals	Academic gold standard for literature: Robust evidence and findings. Counter evidence or replies may also be published—illustrates rigorous academic debate on a topic.
	Published academic books with index and references	Detailed, robust evidence and findings, or one or two chapters which speak to issue being reviewed or similar issues.
	Grey academic literature, internal academic papers and conference proceedings, not peer reviewed or published	Conducted by professional researchers but may be preliminary findings or discussion pieces. Raise questions to be explored further. Indicates active academics and professionals in the field who may be published elsewhere.
	Independent evaluation: economic/cost effectiveness	Independent and professional evaluation of a service or project including costs which will enable unit costs to be derived.
	Independent evaluation: impact	Independent and professional evaluation measuring outcomes of a project or service. Indicates the relative success of model/s of provision
	Independent evaluation: process	Independent and professional evaluation describing interventions, decisions, achievements, effectiveness and quality of projects or services

	In house evaluation or action research	Not independent of service provider. Describes services provided and helps understand what is being offered. May be skewed especially if used to obtain funding. Not necessarily conducted to a recognised evaluation methodology
	Service provider web sites	Useful to understand what is being provided and how. May give number and locations of resource. Contact details if primary research is considered later. May include quant data on service uptake etc.
	Interest groups and campaigners	Demonstrate strength of feeling on the topic
	Media reports	Indicates public opinion on the topic useful to inform policy implementation and service delivery going forward
	Social media e.g. Mumsnet, Twitter, and BTL comments in news reports	Indicates public opinion useful when planning policy implementation and service delivery

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