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The impact of holiday clubs on household food insecurity—A pilot study

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Abstract

This research investigates whether holiday clubs have the potential to reduce food insecurity among households in the United Kingdom. We survey parents ($n = 38$) of children attending seven different holiday clubs to estimate the percentage of children in those programmes who come from food insecure households. Results suggest that 42% (16 out of 38 respondents) of children come from households defined as “food insecure” and 24% (9 out of 38 respondents) come from households that are “food insecure with hunger.” When secure and insecure households are compared, we discover that food insecure households benefit the most from holiday clubs, which suggests that they may play an important role in mitigating household food insecurity.

KEYWORDS

food policy, food poverty, food security, holiday hunger

1 | INTRODUCTION

Holiday hunger is a condition that occurs when a child's household is, or will, become food insecure during the school holidays (Graham et al., 2016). To combat the problem of holiday hunger, holiday clubs have emerged across the UK. These holiday clubs provide meals for children, and sometimes parents, when children are not in school. Despite the rising popularity of holiday clubs, little is known about their effectiveness. The current study presents results from a portion of a larger pilot evaluation of holiday clubs on food insecurity in the UK. In this paper, we focus on the views of parents of children who attend holiday clubs. Specifically, we ask three questions about the role of holiday clubs in attenuating household food insecurity. First, are households with children attending holiday clubs more socially and economically deprived than UK households in general? Second, are households with children attending holiday club likely to suffer from food insecurity? Third, do parents of children attending holiday club believe that the clubs reduce household food insecurity? We answer these three questions by drawing upon questionnaire data that

examine the perceptions of parents whose children attend seven different holiday clubs in the UK.

Information about the potential role that holiday clubs play in mitigating household food insecurity is necessary if these clubs are going to form an effort for mitigating rising food insecurity across UK households. For example, if holiday clubs do not provide food for children from food insecure households, we might ask whether resources could be better spent on other food insecurity mitigation programmes. Prior to carrying out our analysis of holiday clubs, we briefly review the literature on the definition of household food insecurity and its impact on children's health and well-being.

1.1 | Household food insecurity, children and holiday clubs

The notion of household food insecurity has been examined across the globe and is gaining attention in the UK (Blumberg, Bialostosky, Hamilton, & Briefel, 1999; Dowler & O'Connor, 2012; Tarasuk, 2001; Tarasuk & Beaton, 1999). Household food insecurity occurs when

the members of a household are unable to “access enough food to meet dietary energy requirements” (Pinstrup-Andersen, 2009, p. 5). Blumberg et al. (1999, p. 1231) noted that food insecurity may occur “with and without hunger.” However, both conditions may lead to long-term health consequences related to dietary requirements as well as the immediate physical need for food. As noted, we are specifically interested in the problem of food insecurity for UK households with school-aged children during holiday time.

Summer can be especially challenging for school-aged children in food insecure households because they do not have steady access to food (Gill & Sharma, 2004; O'Connor, Wolhuter, & Every, 2015, p. 5). These food insecure households accommodate food shortages by adopting various coping strategies. For example, parents in food insecure households are likely to skip meals to provide food for their children (Defeyter, Graham, & Prince, 2015). Moreover, Gill and Sharma (2004) found that parents purchase less expensive and unhealthy food during the summer months to make ends meet. Parents also report that they sometimes do not pay household utility bills to purchase food for their children during the summer months (Defeyter et al., 2015). Even with these efforts children may still suffer from living in a food insecure household as they may be consuming unhealthy calories, may not have access to water or electricity and/or may rely on parents who are constantly hungry (Drewnowski & Barratt-Fornell, 2004).

The impact of household food insecurity on children's physical and social lives is ubiquitous (Cook & Frank, 2008; Cook et al., 2004). For example, Cook et al. (2006) discovered a positive correlation between household food insecurity and incidence of childhood hospitalisation. Cook et al. (2004) also found that children in food insecure households had more health problems than those in food secure households. Kirkpatrick, McIntyre, and Potestio (2010) determined that hungry children are more likely to report suffering from poor health than children who do not report being hungry. Notably, evidence is starting to emerge that suggests children facing food insecurity are more likely than their food secure peers to suffer from serious and life-threatening outcomes (Seligman, Laraia, & Kushel, 2010). Food insecurity may also interact with variables such as income and ethnic status. For instance, low-income children suffering from food insecurity may adapt lifelong unhealthy eating patterns (Hill, Prokosch, DelPriore, Griskevicius, & Kramer, 2016). Chilton et al. (2009) discovered that children of recent immigrants have more adverse health consequences because of food insecurity than children whose parents are not immigrants. Overall, then, health problems associated with food insecurity may be especially problematic during the summer months and school holidays.

Food insecurity research also suggests that children in food insecure households face significant social problems as a result of no longer having access to school food during the summer months. That is, children who come from households that experience food insecurity are more likely to avoid participating in important social activities with others during the summer (Gill & Sharma, 2004). This may be because they worry or become anxious or sad about their household's food situation and may dread that others will see them as “poor” (Connell, Lofton, Yadrick, & Rehner, 2005). These children also might not invite others to their homes to play as their parents would not be able to offer

What is known about this topic

- Childhood food insecurity is associated with a variety of social and health problems.
- Holiday clubs are becoming a popular solution to help feed children in the UK during school holidays, but little is known about the way these clubs can impact food insecurity in a child's household.

What this paper adds

- Provides preliminary evidence about the impact of holiday clubs on household food insecurity.
- Broadens our thinking about the challenges holiday clubs face as they expand to help feed children during school holidays.

those additional children food to eat (Gill & Sharma, 2004). Moreover, research by Alaimo, Olson, and Frongillo (2001, p. 44) suggested that 12- to 16-year olds who have insufficient access to food are more likely to see a psychologist for emotional problems and are more likely to be “suspended from school, and have... difficulty getting along with other children.” Finally, teachers also tend to rate students suffering from higher levels of food insecurity as having diminished social skills, especially relating to the ability to control behaviour, form and maintain friendships and show sensitivity (Jyoti, Frongillo, & Jones, 2005).

One way that governments and civil society organisations meet the food challenges that children face during the summer is through programmes that provide children with nutritious food. One type of programme designed to address childhood food insecurity in the UK are holiday clubs (Defeyter et al., 2015; O'Connor et al., 2015). The purpose of holiday clubs is to provide free meals (usually breakfasts, lunches and snacks) to children. Food may be provided in a variety of settings, including schools and community groups. These programmes also provide a space for parents and children to socialise, learn and participate in a variety of healthy activities. Many holiday clubs offer time for exercise, play and nutrition skills training for children and their families, as well as opportunities for other members of the child's household (e.g. parents and siblings) to visit at least once per week.

Little is known about holiday clubs like the ones operating in England, Scotland and Wales, and scholars have yet to determine if these clubs provide a service to children living in food insecure households and if they help reduce household food insecurity. To help fill this gap, this research draws upon a pilot study that examines seven holiday clubs in the UK to draw some preliminary conclusions about the programmes and their impact on the food security of households.

2 | METHODS

The study described here is part of a larger evaluation of holiday clubs in the UK. The evaluation included a qualitative study on holiday club

staff views and experiences (see Graham et al., 2016) and a quantitative study of children who attended holiday club food intake and nutritional knowledge. These facets of the evaluation were combined with the views of parents on food insecurity and the role of holiday clubs in reducing food insecurity during the school holidays described in this paper to form a comprehensive pilot evaluation of holiday clubs in the UK. The evaluation took place in August 2015 and was funded by Public Health Wales and Brakes UK.¹

To gain a better understanding of how children and households may benefit from holiday clubs, we surveyed the parents of children (ages 2–18) participating in seven different clubs in the UK. These clubs were chosen because they were the seven clubs in a pilot programme run by Public Health Wales and Brakes UK. Details about the seven clubs are presented in Table 1.

Six of the seven holiday clubs were open between 9:30 and 11:00 a.m., the seventh opened at 12:00. Six out of the seven clubs were free to attend, while the seventh charged £1 per child, per day, to attend. All were closed by 1:30 p.m. Clubs operated 2–4 days per week. Between 9 and 14 children attended the holiday clubs evaluated. Six clubs provided breakfast and lunch, while one provided only lunch. Family members of attendees were also invited to eat at the clubs at least once per week. The age of club attendees varied greatly and one club was open to youth of any age. Importantly, however, children attending these holiday clubs were not targeted according to their level of income. Instead, these clubs were open to anyone who wanted to attend. Public and private sector organisations provided financial support to the clubs. The clubs were held in schools or church halls, and operated by volunteers, school staff, youth workers or sports coaches. Five clubs were in the first year of operation, but one club was in its tenth year of operation (though it only began operating a

holiday club that summer). Recruitment information was presented through the clubs themselves and often through word of mouth.

2.1 | Recruitment and consent

To recruit parent participants for the study,² one member of the evaluation team met with some of the clubs' staff in person to describe the evaluation. For those she was unable to meet with, the information was posted in the mail to the club staff. After reviewing the information, the funders and staff were given the opportunity to ask questions and provide feedback to the evaluation team. The materials, including the questionnaire on the parents' views, were then finalised and delivered to the seven clubs.

Informed consent was obtained from parent participants by handing out a consent form that contained an overview of the project and which required the parent's signature. Club staff handed out the consent forms and questionnaires to parents whose children attended the holiday club. As the research team did not have direct access to parents, it was necessary to use the club staff as gatekeepers to invite parents to take part in the evaluation. Given that the parents were familiar with the club staff, this generally encouraged participation. However, parental participation still proved difficult as 38 of the 100 questionnaires that were distributed to parents were completed and returned to the researchers.³ Parents were not required to include their names on the questionnaires. Parents were provided with two envelopes in which to return their consent forms and questionnaires separately to ensure that questionnaire data were not identifiable. The consent forms and questionnaires were returned in sealed envelopes by the parents to club staff where they were then collected by researchers. Parents were not given an

TABLE 1 Descriptive information of holiday clubs in the evaluation

Club	Location	Setting	Led by	Availability	Provision
1	Wales	Primary School	School staff	9:30–1:00 3 days per week for 4 weeks	Breakfast, lunch and activities (sports, crafts and nutrition)
2	Wales	Primary School	School staff	9:30–1:00 3 days per week for 4 weeks	Breakfast, lunch and activities (sports, crafts and nutrition)
3	Wales	Secondary School	School staff	9:30–12:30 for 1 week	Breakfast, lunch and activities aimed at helping children moving from primary to secondary school
4	Wales	Primary School	Housing association staff and sports coaches	9:30–1:00 3 days per week for 4 weeks	Breakfast, lunch and sports activities
5	Wales	Primary School	School staff	9:30–1:00 3 days per week for 4 weeks	Breakfast, lunch and activities (sports, crafts and nutrition)
6	South of England	Town Hall	Volunteers	12:00–1:30 2 days per week for 5 weeks	Lunch and activities (crafts and board games)
7	Scotland	Church Hall	Volunteers	11:00–1:00 5 days per week for 6 weeks	Breakfast, lunch and activities (sports and crafts)

incentive to complete the survey and all were informed that they did not have to participate in the research and that any answers they provided on the questionnaire would be confidential and only known to the researchers.

2.2 | Questionnaire and data

Parents were asked by holiday club staff to complete a questionnaire booklet containing a variety of open- and closed-ended questions on parents' demographics, family circumstances and views on holiday clubs. Parents were given the option to take the questionnaire away with them or to complete it within their child's holiday club. Holiday club staff was available to help any parents who required support to complete the booklet.

We measured food insecurity with and without hunger using the six-item short form of the household food security scale (see Blumberg et al., 1999).⁴ The questions used to construct the scale include (1) The food that we bought just didn't last, and we didn't have money to get more. Was that often, sometimes or never true for your household in the last 12 months? (2) We couldn't afford to eat balanced meals. Was that often, sometimes or never true for you in the last 12 months? (3) In the last 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food? (Yes/No), (4) Ask if "Yes" to number 3. How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months? (5) In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food? (Yes/No) and (6) In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food (Yes/No). These questions were developed specifically to measure food insecurity in households and have been empirically tested and verified across a number of studies (e.g. Bauer et al., 2012; Jernigan et al., 2017). In order to identify food insecurity for households in holiday clubs, we score the total number of "yes" responses to the questions.⁵ A score of 2 or more indicates that a household is "food insecure" and a score of 5 or more indicates that a household is "food insecure with hunger."

To measure the benefits of holiday club, we employed three questions. Specifically, we asked them whether they agreed or disagreed that without the holiday club, (1) "It's harder to make ends meet during the summer than during the school year"; (2) "We spend more on food during the summer than during the school year"; and (3) "We sometimes find ourselves without enough money for food during the summer." Responses to these statements range from "strongly disagree" (coded "1") to "strongly agree" (coded "5").

2.3 | Analytic strategy

We addressed our first research question, "are households with children attending holiday clubs more socially and economically deprived than UK households in general?" in two ways. We first briefly compared the level of economic deprivation of the neighbourhoods where

the holiday clubs are located to the rest of the UK, using data on the percentages of working age people who receive benefits to get an overview of whether holiday clubs appear to be located in areas with high levels of food insecurity. We next turned to our questionnaire data and compared parents of children who attended the holiday clubs evaluated in our study with members of the general population in the UK on key social and economic variables.

Following the demographic analyses, we addressed the other two research questions which specifically examined food insecurity. We used parent responses to the six-item food insecurity scale to address the second research question, "are households with children attending holiday club likely to suffer from food insecurity?" Finally, the third research question is an attempt to determine if "parents of children attending holiday club believe the clubs reduce household food insecurity." We compared households that report being food insecure (and food insecure with hunger) with households that are food secure. In order to make comparisons, we relied on the parents' responses to three statements about their experiences with holiday clubs. This comparison allowed us to determine if holiday clubs help those households that face the highest levels of food insecurity.

It is important to point out that due to the relatively small sample of respondents we calculated the probability values for independent sample *t* tests that address the third research question using permutation methods (Mielke & Berry, 2007). The advantage of permutation methods is that they are data-dependent, meaning that the estimation of test statistics with a continuous distribution (e.g. Student's *t*) is not necessary and they are free of the usual assumptions associated with traditional asymptotic tests.⁶ All statistical analyses were carried out in Stata 13.1.

3 | RESULTS

3.1 | Demographic results

On average, the seven holiday clubs we studied operate in neighbourhoods (i.e. lower layer super output areas, see <http://www.neighbourhood.statistics.gov.uk/>) that are more economically deprived than in the UK as a whole. For instance, the average percentage of people of working age (16–64) claiming key benefits in 2011 in neighbourhoods where these holiday clubs are located is 24% compared to approximately 12% of people claiming work-related benefits across the UK as a whole during the same time period (Office of National Statistics, 2015).

Thirty-four of the 38 questionnaires were completed by mothers of children who attended holiday clubs, while three of the questionnaires were completed by fathers.⁷ Parents who completed the survey were, on average, 35.9 years old (*SD* = 6.4 years). Fifty-eight percent (22/38) of the parents described themselves as "white" and 3% described themselves as "black" (1/38). Ninety percent (34/38) parents surveyed identified as "British," "English," "Scottish" or "Welsh." Following "white," the percentages of the other ethnicities of the families who attended the clubs were: African = 13% (5/38), Pakistani = 11% (4/38),

TABLE 2 Demographic characteristics of holiday club and United Kingdom population in 2015

Variable	Holiday Club	United Kingdom
Employed	42%*	73% ^a
Annual Income	£20,875*	£27,600 ^b
Household Size	4.8*	2.4 ^c
% White	58%*	87% ^d

*Difference between holiday club and UK is significant at $p < .05$ (two-tailed).

^aUK Office for National Statistics, 2015, *UK labour market*, www.ons.gov.uk/ons/dcp171778_412021.pdf.

^bUK Office for National Statistics, 2015, *Annual survey of hours and earnings*, www.ons.gov.uk/ons/dcp171778_424052.pdf.

^cUK Office for National Statistics, 2015, *Families and households*, www.ons.gov.uk/ons/dcp171778_422175.pdf.

^dUK Office for National Statistics, 2011, *Ethnicity and national identity in England and Wales*, www.ons.gov.uk/ons/rel/census/2011-census/key-statistics-for-local-authorities-in-england-and-wales/rpt-ethnicity.html.

Indian = 5% (2/38), Caribbean = 3% (1/38) and Chinese = 3% (1/38). The reported average annual household income of households participating in holiday clubs was £20,875 ($SD = £11,956^8$), but 42% (16/38) of the parents who completed the survey stated that they were unemployed. The educational background of parents whose children attended holiday clubs also varied. Eleven parents reported that they had GCSEs and five had A-levels or above. Household size varied considerably (between two and nine members), but averaged 4.8 persons per household ($SD = 1.3$).

As Table 2 suggests, parents whose children attend holiday clubs are less likely to be employed (42% vs. 73%), have slightly lower incomes (£20,875 vs. £27,600) and have larger households (4.8 vs. 2.4 members) than the general population in the UK. Moreover, parents of children who attend holiday clubs are less likely to be white (58% vs. 87%) than the general population as a whole. As a result, these households appear to be more economically insecure and socially disadvantaged and are therefore likely to be at risk of food insecurity.

TABLE 3 Six questions about household food insecurity for holiday club participants ($n = 38$)

Question	n (yes)	% (yes)
The food that we bought just didn't last, and we didn't have money to get more. ¹ Was that often, sometimes, or never true for you in the last 12 months?	16	42
We couldn't afford to eat balanced meals. ¹ Was that often, sometimes, or never true for you in the last 12 months?	16	42
In the last 12 months, did you or other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food? Yes or No.	14	37
Ask if "Yes" to Statement 3. How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?	12	32
In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food? Yes or No.	9	24
In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food? Yes or No.	8	21

TABLE 4 Frequencies of household food security status

Household status ^a	n	%
Food secure	22	58
Food insecure without hunger	7	18
Food insecure with hunger	9	24

^aHousehold status is determined by the answers to the six questions list in Table 3. Food secure = 0–1 yes answers, food insecure without hunger = 2–4 yes answers and food insecure with hunger = 5–6 yes answers.

With these sample characteristics in mind, we turn our attention to food insecurity for children of families attending these programmes.

3.2 | Food insecurity results

We begin our analysis by examining parents' reports of food insecurity in their households over the last 12 months to determine whether the holiday clubs we evaluated tend to serve those households that can be classified as "food insecure." Results in Table 3 suggest that the holiday clubs are largely focused on households that face food insecurity. For instance, 42% (16 out of 38 respondents) of all households where at least one child attends a holiday club are likely to be classified as food insecure, and 24% (9 out of 38 respondents) of all households where at least one child attends holiday club are likely to be classified as food insecure with hunger. This finding suggests that a large portion of children who attend holiday clubs come from households that are food insecure, and a somewhat smaller portion of those children come from households that suffer from food insecurity with hunger. Table 4 displays the frequencies of household food security status based on the scale created from the six food security questions presented in Table 3. Twenty-two of the 38 households in the sample (58%) are food secure, which means that 42% (16 out of 38) of the families that utilised the holiday clubs faced some level of food insecurity during the last year. This included 9 of the 38 households (24%) who reported dealing with food insecurity with hunger during the last 12 months.

	All food insecure (with and without hunger) (1) vs. food secure (2)				Food insecure with hunger (1) vs. food secure and food insecure without hunger together (2)			
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>p-value</i> ^a	<i>n</i>	<i>M</i>	<i>SD</i>	<i>p-value</i> ^a
Without holiday club it's harder to make ends meet during the summer than during the school year								
Group 1	16 ^b	4.00	0.27	0.016	9	4.00	0.37	0.047
Group 2	19	3.53	0.27		26	3.65	0.23	
Without holiday club we spend more on food during the summer than during the school year								
Group 1	16	4.19	0.33	0.325	9	4.33	0.44	0.233
Group 2	22	4.27	0.21		29	4.21	0.20	
Without holiday club we sometimes find ourselves without enough money for food during the summer								
Group 1	16 ^b	3.00	0.43	0.093	9	3.33	0.58	0.042
Group 2	19	2.84	0.28		26	2.77	0.26	

^aOne-tailed *p*-values. The *p*-values are generated using a permutation procedure outlined in note 6, based on 10,000 resamples.

^bThirty-five out of 38 respondents answered these two questions.

Table 5 contains comparisons of means, along with tests of statistical significance, for the relationship between food insecurity and benefits of holiday clubs. As Table 5 suggests, holiday clubs disproportionately help those households that are food insecure (and insecure with hunger) in two particular instances. First, those parents in households that are defined as food insecure (with and without hunger) are more likely than households that are defined as food secure to agree with the statement, "Without the holiday club it's harder to make ends meet during the summer than during the school year" (4.00 or "agree" vs. 3.53 or "neutral/agree"; $p = .016$). This same finding is true in the case of food insecurity with hunger only (4.00 vs. 3.65; $p = .047$). As a result, holiday clubs appear to matter most with respect to easing the pressure of getting access to food for those households facing food insecurity and food insecurity with hunger. That is, holiday clubs may help to disproportionately attenuate food insecurity for the most insecure households. Second, we find that households that are defined as food insecure (with and without hunger) are more likely than households that are defined as food secure to agree with the statement, "Without the holiday club we sometimes find ourselves without enough money for food during the summer" (3.00 or "neutral" vs. 2.84 or "disagree"; $p = .093$). We find this same pattern in the case of food insecurity with hunger only (3.33 vs. 2.77; $p = .042$).

Importantly, we found no differences between the groups of households with respect to the second statement: "Without the holiday club we spend more on food during the summer than during the school year." This suggests that all parents in households with children who attend holiday clubs agree that they would spend more on food without the programme. In the end, then, it appears that households that are food secure are likely to also spend less on food because of the holiday club, but are more likely to have enough money to afford food and make ends meet even if the household's children did not participate in the holiday club. This is not the case

TABLE 5 Means, standard deviations and permutation *p*-values for *t* tests for food secure vs. food insecure households (with and without hunger) on the benefits of holiday club

for food insecure households (with and without hunger) and food insecure households with hunger. Instead, although the parents in such households agree that they spend less on food because of the holiday club, they also suggest that they are more likely than their food secure counterparts to agree that their household budgets would not allow them to eat if not for the holiday club. In short, evidence points to the conclusion that holiday clubs disproportionately help children in those households that are the most food insecure. The food that children receive in holiday club appears to be beneficial by reducing food costs for all households with children who attend these programmes, but it disproportionately helps protect food insecure households from the negative consequences of rising food costs.

4 | DISCUSSION AND CONCLUSION

Holiday hunger is a growing concern in the UK and the government is starting to take notice. For example, the All-Party Parliamentary Group on Hunger, chaired by Frank Field MP, recently released a report that noted up to 3 million children are at risk of being hungry during the school holidays. The report goes on to highlight the important role holiday clubs can play in helping to alleviate that hunger (APPG (All-Party Parliamentary Group) on Hunger, 2017; see also Machin, 2016 for an interview on holiday hunger with Ruth Smeeth, APPG vice-chair on School Food). Therefore, it is paramount for research to evaluate the effectiveness of holiday clubs to help combat holiday hunger throughout the UK.

In this vein, we examine seven holiday clubs in the UK to determine whether these programmes (1) serve households that are more socially and economically disadvantaged than the those in the UK in general, (2) are likely to recruit children from households that are defined as food insecure and (3) help attenuate the problem of food

insecurity among households as reported by parents. Importantly, we found that a large percentage of children attending holiday clubs come from households that can be defined as suffering from food insecurity, and a significant number of children in these programmes come from households that are not only food insecure but also face frequent episodes of hunger (i.e. face food insecurity with hunger). Our results also suggest that children who come from households that are defined as food insecure disproportionately benefit from these clubs when compared with children who come from households that are food secure. The holiday clubs in this pilot study appear to be helping those UK households that suffer from food insecurity. As a result, these clubs may be helping to attenuate the problems associated with children who live in food insecure households during the summer holidays across the UK.

While our results for these particular holiday clubs are promising, we recommend caution for three reasons. First, indicators of household food insecurity need to be examined for all programme participants, not just the ones in our study, to ensure that these clubs are reaching those who need these services—especially because clubs do not have income requirements. Specifically, our study only examined seven programmes in the UK. Thus, while there is little reason to believe that the clubs we study are atypical, it could be that these particular programmes are not representative of those across the UK in general. Second, some parents did not fill out the survey. The extent to which these missing cases would have altered the analysis is hard to determine. However, it may be the case that parents from the most disadvantaged households were also the most suspicious of our research and therefore are underrepresented in the sample. If this is the case, then we likely underestimate the percentage of children in holiday clubs who come from households defined as food insecure. Third, this is a pilot study with results based on a small sample of cases ($n = 38$); therefore, it is not possible to meaningfully generalise to the rest of the UK. Given that little is known about the effectiveness of holiday clubs in the UK in general, and even less is known about parents' views of holiday clubs, this study can serve as a starting point for future research in the area.

Despite our generally optimistic findings and study limitations, we offer two important observations about the effectiveness of clubs over time. First, as already noted, many parents indicated that they discovered holiday club through word of mouth. Importantly, poverty may limit social networks so this may be problematic and over time lead to a situation where these programmes are not serving children from food insecure households, but rather those who have the best social networks. Indeed, some evidence of this has already been observed in the North of England. Power, Doherty, Small, Teasdale, and Pickett (2017) discovered that there is substantially less food aid in Muslim communities in their study area. Given the well-known link between ethnicity and poverty, this situation needs to be monitored to ensure equality of access and service, as approximately 42% of our respondents identified as coming from an ethnic group other than "white." Broadly then, we highlight the need to find ways to inform those groups who suffer from food insecurity most frequently and therefore need holiday clubs most (e.g. member of lower social classes

and minority ethnic groups), about the existence of holiday provision in their areas and then to encourage them to attend.

Second, we believe that some club organisers might be tempted to restrict holiday clubs to only those children who come from food insecure households by placing income restrictions on club attendance. However, it is within this context of holiday programme services that we caution against the segregation of children from food insecure households. That is, we do not advocate that holiday clubs *only* serve children from households that are food insecure, as this may be counterproductive. Most parents of participants in these clubs recognise segregation and labelling of holiday clubs as a problem. For instance, when asked about the biggest obstacle to participation in the food clubs, parents noted the potential for these clubs to become defined as a service for the poor. As a result, labelling clubs as places for poor children may make it more difficult to get children to attend these clubs and thus may intensify class segregation. While holiday clubs should serve food to children from insecure households, maintaining a broad demographic that extends social networks is important. Indeed, 80% of all parents attending the clubs felt that the clubs "should be available to everyone regardless of income."

Holiday clubs are becoming more common throughout the UK as local governments and the third sector try to tackle the growing problem of holiday hunger. For instance, the Mayor's Fund for London recently began a 3-year project aimed at funding hundreds of holiday clubs throughout the city. Furthermore, the UK Big Lottery funded a similar project in the North East of England to start 17 holiday clubs in the region. These are just two examples of holiday club initiatives that are springing up throughout the UK. As this approach to responding to the problem of holiday hunger becomes more common, future research will be needed to further assess the effectiveness of the clubs.

In summary, this research offers a glimpse into the potential role of holiday clubs and is the first of its kind in the UK to evaluate these clubs from the perspective of food insecurity by looking at the households these clubs serve as well as the impact of these clubs on household food insecurity. As holiday clubs continue to emerge across the UK, future research will need to determine how they engage with children from food insecure households. Importantly, while the current study suggests that holiday clubs are helping to reduce household food budgets during the summer months, it is still unclear exactly how households benefit and whether they use any surplus to purchase more expensive healthy foods that increase security, or spend the money on other household necessities or even cheaper, less healthy food. Answering this and other similar questions is important as these clubs continue to proliferate across the UK. Thus, we hope that this research has helped provide information on the role of holiday clubs across the UK while opening up new questions for future research and study.

ENDNOTES

¹ There is a co-author of the manuscript from each of these two organisations. They were included as authors on the manuscript because they made significant contributions to details about the intervention. In no way did

either co-author have any impact on the design, implementation or analysis of the actual evaluation.

² The researchers' institutional ethics board approved the questionnaire and the method for collecting data (ethics board approval number SUB094_Graham_200715).

³ The response numbers for the individual clubs were: club 1, $n = 6$; club 2, $n = 9$; club 3, $n = 3$; club 4, $n = 10$; club 5, $n = 4$; club 6, $n = 2$; and club 7, $n = 4$.

⁴ The six-item food insecurity scale is a reduced version of the 18-item scale developed from the 1995 Current Population Survey for US households for the Food Security Measurement Project (Hamilton et al., 1997) that has been widely used in food security research. The six-item version has been shown to be useful tool for national and local food security projects (Blumberg, Bialostosky, Hamilton & Briefel 1999), while not being as burdensome on participants to complete.

⁵ We follow convention and suggest that "often" and "sometimes" are affirmative responses, as are "almost every month" and "some months."

⁶ The p -values are calculated through repeated sampling (i.e. resampling). For each sample, a test statistic is calculated, compared against the observed value and summed if the calculated value is greater than the observed value (c). We employed 10,000 resamples (n) in our analyses. The p -value = c/n . (Mielke and Berry (2007).

⁷ The relationship between the adult and child was not indicated on one questionnaire.

⁸ Only 20 of the 38 respondents reported their annual income, 37 out of 38 reported their gender, 34 out of 38 reported their age, all 38 answered the remaining demographic and food security questions. Thirty-five out of 38 answered holiday club questions 1 and 3, while all 38 answered holiday club question 2.

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