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Healthy Eating in the Early Years: A Qualitative Exploration of Food Provision in the Child-minder Setting

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Abstract

Purpose

A nutritious diet is critical to the health and development of pre-school children. Children in the UK consume much food outside the home yet day-care food provision is unregulated, and informed by disparate and conflicting dietary guidelines. Factors affecting nursery food provision have been much studied, but less is known about food provision in the child-minder setting. This study examined factors influencing child-minders' food provision.

Design/methods

Qualitative methods were employed, combining participant observation with semi-structured interviews. Participants were selected via purposive and convenience sampling. Eight child-minders from a large town in Yorkshire, England were interviewed.

Findings

The food provided by child-minders was not consistent with dietary guidelines for young children, following menu plans was reported to be difficult, and knowledge about healthy eating guidelines for young children was various. Child-minders reported limited time for food preparation, and problems catering for fussy children. Some child-minders obtained support through an informal peer network group. Only one child-minder reported availing of professional nutritional advice on healthy food provision. Communication with parents about food was considered important, although there was some evidence of discord between providers and parents in dietary objectives.

The study was small in size and regionally based. Due to the local nature of the study, it is not possible to make generalisations to the wider national context

Practical Implications

Child-minders have a pivotal role to play in the nutritional health and development of young children, and whilst their interest in provision of nutritious food was great, outside support was lacking. Support should include provision of one clear set of authoritative guidelines, practical guidance that accommodates the realities of providing food in the child-minder setting, investment to strengthen support structures at local level and the development of network groups.

52 ## Background
53 The first five years in a child's life represent a critical time for growth and development and
54 good nutrition is vital (Strategic Review of Health Inequalities in England post-2010, 2012).
55 However, studies report that young children's diet do not meet recommended nutritional
56 requirements (Geissler and Singh, 2011; Public Health England, 2012) and more than a fifth
57 of children in England are overweight or obese by the time they reach primary school (The
58 Health and Social Care Information Centre, 2013). Obesity has a plethora of negative health
59 consequences (Ebbeling et al., 2002; Haines et al., 2007; World Cancer Research Fund,
60 2007). Moreover, there has been a rise in the incidence of rickets (Pearce and Cheetham,
61 2010) and dental health is poor in many young children (Audit Commission, 2010).
62
63 Nutritional health in the early years (1-5 years) has been somewhat neglected in favour of a
64 focus on school-aged children (Audit Commission, 2010). However, intervention during this
65 time period is thought to be critical to reduce health inequalities across the life-course
66 (Strategic Review of Health Inequalities in England post-2010, 2012). Eating habits are
67 ingrained at a young age, so overweight children are likely to become obese adults
68 (Freedman et al., 2004; Scaglioni et al., 2011). Furthermore, dietary patterns in the years
69 before school may impact on later educational attainment and behaviour (Robinson et al.,
70 2004; Wiles et al., 2009).
71
72 Increasing numbers of UK pre-school children attend day-care, including nurseries,
73 children's centres and child-minders' homes and many young children receive a large
74 proportion of their daily diet outside the home (Crawley, 2006; Parker et al., 2011). All early
75 years settings are regulated by the Office for Standards in Education Children's Services and
76 Skills (OFSTED) and statutory guidance – the Early Years Foundation Stage (EYFS) – was
77 introduced in 2008 (Department for Education, 2012). Provision of food and drink falls
78 within EYFS guidance, but this guidance is vague: 'where children are provided with meals,
79 snacks and drinks, they must be healthy, balanced and nutritious.' Crucially, no attempt is
80 made to elaborate on what 'healthy, balanced and nutritious' might mean and this
81 combination is simply left open to interpretation. Furthermore, a nutritious diet for a young
82 child is markedly different to that of an older child or adult and indeed the regulations lack
83 mention of any specific dietary requirements of this age group.
84

85 In January 2011, under the auspices of government, the Children's Food Trust (CFT)
86 reviewed food provision in early years settings and published food-based guidelines
87 (Children's Food Trust, 2012). However, these guidelines remain voluntary and add to an
88 array of advice from independent bodies and businesses for example Waitrose Ltd, Pre-
89 school Learning Alliance, Dairy Council and First Steps Nutrition Trust. Unsurprisingly,
90 several reviews (Fookes 2008; Children's Food Trust 2012; Department for Education 2012)
91 cite widespread variability in awareness of and use of guidelines within nursery settings;
92 providing healthy food is often viewed as mere common sense, and nursery providers report
93 inadequate training on healthy eating in the early years, with cost and availability cited as key
94 barriers to further training (Moore et al., 2005; Parker et al., 2011). Child-minders in
95 particular are thought to lack awareness of these guidelines (Buttivant and Knai, 2012; Moore
96 et al., 2005), although empirical data are limited.
97
98 Unfortunately, reviews indicate problems with diet quality in early years settings (School
99 Food Trust, 2010). Meals provided by nurseries have been reported to lack energy,
100 carbohydrate and essential minerals, such as iron and zinc, and many foods high in salt, sugar
101 and fat that are now banned or restricted in schools are regularly served to children under five
102 (Children's Food Trust, 2012; Fookes, 2008; Lloyd-Williams et al., 2011; Parker et al., 2011;
103 School Food Trust, 2010). Furthermore, there are reports of over-provision of fruit,
104 vegetables and dietary fibre (School Food Trust, 2010).
105
106 Whilst the factors underpinning food provision in nurseries have been examined (Lloyd-
107 Williams et al., 2011; Parker et al., 2011), little attention has been given to child-minder
108 settings. There is a recognition that home-based provision differs from centre-based provision
109 (Centre for Research in Early Childhood and Department of Health, 2010) and one study
110 reported child-minders to be operating under a variety of constraints, including tight budgets
111 and the sometimes forceful opinions of parents (Moore et al., 2005). Consequently, the
112 purpose of the current research was to address this gap, namely to examine the factors
113 impacting on current food practices of child-minders.
114

115 ## Methods
116 The study was conducted in Rotherham, a metropolitan borough of South Yorkshire, UK,
117 between April and August 2013. Rotherham records high levels of social deprivation
118 (Rotherham Metropolitan Borough Council and NHS Rotherham, 2015). In 2008 Rotherham
119 Metropolitan Borough Council (RMBC) introduced a training scheme (Healthy Foundations)
120 for a range of early years care providers. The scheme covers all aspects of healthy child
121 development, including weaning, physical activity and play, and providers are directed to
122 resources on healthy eating (Children's Food Trust, 2012; Crawley, 2006). Notably, the
123 scheme is not mandatory; training is intended for a range of early years' providers, including
124 nurseries, pre-schools and child-minders.
125
126 A qualitative research design was employed to gain an in-depth understanding of the child-
127 minder setting. An adapted ethnographic approach was utilised to observe current food
128 practices; due to practical considerations full immersion in the research setting was not
129 achievable. The primary data was thus generated from semi-structured interviews. A
130 reflexive journal was maintained by the researcher throughout the process (Green and
131 Thorogood, 2009). The University Ethics Committee and Rotherham Metropolitan Borough
132 Council (RMBC) Research and Governance Department granted ethics approval.
133

134 ### Sample Recruitment
135 The selection of the child-minders for the research involved the cooperation of the Early
136 Years and Childcare team at RMBC, which held the names and contact details of all
137 registered child-minders on a secure database. Participants were recruited from this database
138 via purposive sampling in order to explore the current practice and experience of both child-
139 minders involved in the *Healthy Foundations* training and those not involved in the scheme.
140 Individuals who had not agreed to share their details with RMBC were not included.
141 In total 26 child-minders received a letter from the Early Years and Childcare Strategy
142 Manager at RMBC, inviting them to take part in the research study. The invitation letter
143 included a description of the aims of the research study, information as to what was involved
144 in taking part, and a consent form. Those who were happy to take part in the study were
145 asked to return the consent form in a pre-paid envelope. Out of the 26 child-minders
146 contacted, just one returned the consent form; subsequently all child-minders were contacted
147 via telephone to see if they would be willing to take part in the research study. Consequently,
148 the sample selection involved both purposive and convenience sampling.

149 ## Data Collection

150 All interviews were conducted face-to-face in child-minders' homes; this allowed for direct
151 observation of current food practices in cases where child-minders were preparing and
152 serving food. Field notes on practices around food provision were then made immediately
153 following leaving the child-minder's home. Details of food provided over a 7-d period were
154 collected if the participant kept a menu plan.

155

156 An interview schedule was developed with the support of key stakeholders working within
157 the LA. A pilot interview was carried out with a child-minder external to the study in order
158 to refine the interview schedule. Interviews were semi-structured covering the following
159 areas: participants' current practice around provision of food and drink to children under five
160 years in their care; communication with parents about the food provided; participants'
161 understanding of healthy eating for children under five years; participants' view of their role
162 in providing and promoting a healthy diet; problems participants encounter in providing
163 healthy food; guidance and support available to child-minders around provision of healthy
164 food.

165

166 Each interview lasted in the range of 15 to 90 minutes – with an average of approximately 30
167 minutes. All interviews were arranged at a time convenient for the participant. Before each
168 interview commenced the participant was briefed on the study including research aims and
169 objectives; what the interview would comprise; ethical issues of confidentiality, anonymity
170 and their right to withdraw. Following this, written consent was sought from all participants,
171 if not already received.

172 The researcher asked open questions throughout to minimise interviewer-bias. However, at
173 times, some closed questions were employed to elicit further detail and probes were utilised
174 to ensure adequate generation of data. All interviews were digitally recorded; yet to check for
175 any reactive effects of the recorder, the researcher continued to 'chat' to respondents when
176 the recorder was switched off to check whether they had anything else to add (Bowling,
177 2009). The researcher later transcribed all interviews in order to maintain familiarity with the
178 data.

179

180 ## Analysis

181 Analysis employed a qualitative thematic approach. An initial set of codes were developed
182 from the interview transcripts and field notes; this coding scheme emerged deductively from

183 pre-existing questions and theory, as well as inductively from the data itself (Seale, 2004).
184 NVivo 10 software was then utilised to map codes and develop themes – identifying any
185 associations between themes and enabling the researcher to discuss the meaning of the data.
186 Analysis was an on-going iterative process, where arising themes were used to direct
187 subsequent interviews and observations. As part of the reflexive process, emerging themes
188 were discussed with other members of the research team.
189

190 ## Results

191 A total of eight child-minders, registered with RMBC, were interviewed as part of the study.

192 ### 1. Food and Drink Provision in the Child-minder Setting

193 #### *Routine of Care and Time Constraints*

194 Whilst five subjects had a menu plan, these varied in level of detail and were not always
195 used. Planning meals in advance was often not practical due to day-to-day variation in
196 routine of care and the resultant variability in demand for provision of meals and snacks.
197 Child-minders sometimes supervised children's consumption of prepared food provided by
198 parents. However, this was not widespread and some child-minders actively discouraged
199 parents from providing food to avoid *"conflict"* between children.

200 *"First day she turned up with yoghurt and a packet of crisps – I says I can't give her the*
201 *crisps cos I've not got a packet of crisps for everybody else and I don't provide those"*

202 Where parents provided food this was believed to be because "*then they know exactly what's*
203 *in there"*, or due to cost. Other reasons for parents providing food were special dietary
204 requirements of children, fussy eaters, or providing for babies.

205 Many of the child-minders reported that managing the differing schedules of children within
206 their care impacted upon their time available to cook. These participants were the sole
207 provider of care to what could be a large number of children (up to 11) and one child-minder
208 refused to provide the main evening meal, as she felt it would reduce her capacity to look
209 after the children in her care. This child-minder was not alone in her concern:

210 *"Yeah it's (food provision) influenced with time as well, because obviously I can't spend a lot*
211 *of time in the kitchen when I'm meant to be looking after them…"*

212 There was an acknowledgement that time constraints could negatively impact on food
213 provision – participants reported serving foods such as *"fish-fingers for ease"* However,
214 some child-minders reportedly felt more equipped to cope and often prepared things in
215 advance which just required re-heating – there was clear variability in cooking and/or
216 organisational skills.

217

218 #### *What do children want to eat?*

219 Food provision was largely driven by children's "*likes and dislikes*. The role of children's
220 preferences in provision is exemplified in a quote from a child-minder in the current study:

221 *"I try to mix it up, you know and erm so either fish fingers or cos to be honest I think well*
222 *yeah you could prepare the most healthy meal in the world and they'll just sit and look at it*
223 *and think what on earth is that and they just wouldn't eat it."*
224 Children refusing to eat, fussy eating, - was encountered by all child-minders, although some
225 voiced concern to a greater extent than others:
226 *"I really struggle with it, she really really is bad with it er to the point where the thing she'll*
227 *eat the most is tomato soup and she comes three days ... we're very often having that twice a*
228 *week out of the three days."*
229 The child referred to in the above quote ate a very limited diet in childcare and reportedly ate
230 "*junk all the time"* at home; other children too were reported as fussy, although not to such
231 extreme: *"Vegetables. Erm, it's like a nightmare to get him to try and eat a couple of*
232 *carrots"*. Most child-minders employed tactics to encourage children to eat: hiding
233 vegetables *"so they don't tend to know it's there"*; presenting food in creative ways such as
234 *"salad caterpillars"*; or children were *"encouraged just by saying if they eat their tea they*
235 *get pudding"*.

236 The Child-minder as a Provider of Healthy Food

237 *Healthy Eating Knowledge*

238 All participants were asked what they understood as *healthy eating for children aged one to*
239 *five years*. Most participants recalled headline messages such as *"five-a-day"* and *"balanced*
240 *diet"*. There was a good understanding of the need for children less than two years to have
241 full-fat milk and older children to have semi-skimmed. Most child-minders also made
242 reference to *"portion control"* and some referred to the need of younger children to eat *"little*
243 *and often"*. However, only two child-minders made reference to levels of salt and two
244 participants said they did not know how to answer the question.
245 Child-minders reported that meals were *"mainly cooked from scratch"*, although
246 participants' interpretation of cooking from scratch differed. Meals provided ranged from
247 *"salmon and potatoes and broccoli and carrots"* to more convenience meals, such as chicken
248 balls and oven chips. The primary understanding was *"basically lots of fruit, vegetables"*.
249 Indeed, there appeared to be an over-reliance on fresh and dried fruit for snacks. However,
250 despite the understanding for *"five-a-day"*, some child-minders did not consistently provide
251 vegetables as part of the main meal.

252 *Source of Knowledge – Guidelines and Training- Access to Support*
253 Child-minders noted that food did not feature much in guidance: *"regarding guidelines for*
254 *food and things I mean to be fair I don't really see a lot of that in the EYFS, I see nothing in*
255 *the EYFS regarding food.... I don't actually think it says enough – I don't think it really hits*
256 *the mark"*
257
258 Half of the participants had not seen any guidelines for healthy eating for children less than
259 five years; of those that had half again did not employ them in their practice and just had a
260 *"quick look"*. Sources of information cited were books, the Internet and Change4Life
261 materials. Worryingly, one child-minder referred to knowledge gained from her experiences
262 of dieting and equated healthy eating with low-fat, high-fibre diets, not suitable for young
263 children. Furthermore, two participants reported using the guidelines for school-aged
264 children, which again are not appropriate for children under five. Most of the child-minders
265 were unaware that there was a local training scheme, which included food: *"I've not seen a*
266 *course."*
267
268 However, a number felt further support and training would be beneficial to know *"you're*
269 *doing it right"*. Furthermore, menu ideas *"to make it more exciting"* and *"hands-on training*
270 *of food"* were cited as key areas for practical guidance, as was information on appropriate
271 portion sizes. Some child-minders were more apathetic towards further support, although
272 three such participants still said they would like more guidance surrounding feeding babies
273 and providing weaning food.
274
275 Child-minders can be quite isolated and one participant reported that since OFSTED had
276 taken over they were more *"adrift"*, although there was an acknowledgement that they could
277 contact the Local Authority for support if necessary. A number of participants reported
278 attending local network groups and receiving support from their peers: *"…you go to network*
279 *groups and you say I've got one that won't do so and so what did you do about it and ninety*
280 *nine per cent of the time someone else will have had exactly the same problem. So I've*
281 *always found support in the groups that I go to…"*
282 However, the structure of such network groups varied – one participant attended a network
283 group linked with Sure Start and could gain access to dieticians and other health professionals
284 for support, but this was unusual. As one participant explained: "*all the onus is on you – the*

285 *onus is on you to research it, read up on it, find it, apply it and just basically muddle your*
286 *way through it".*

287 ## The Child-minder-Parent Relationship

288 ### *Partnership – the importance of communication*

289 Child-minders iterated their commitment to working in *"partnership"* with parents. All
290 child-minders operated an induction process, whereby they learnt what food parents wanted
291 them to provide; this also allowed the child-minder to explain any practice policies regarding
292 food provision, for example not allowing sweets. Some child-minders were quite explicit in
293 their approach – *"I have rules and I don't bend them for anybody really*"; but many felt that
294 the ultimate authority and responsibility for providing healthy food rested with the parents:
295 *"…if they really really do not like it and they will not eat it and it's somebody else's child, I*
296 *think well you know you can't force them to eat it cos it's not your child, but if it's my own I'd*
297 *treat them a little bit differently."*
298 Child-minders used food diaries (three participants) and displayed menus on a notice board at
299 home or online (five participants) to communicate with parents what children were eating
300 whilst in their care. However, the extent of communication with parents did vary between
301 participants. Child-minders reported increased levels of communication when there was an
302 issue, for example food allergies, or a child refusing to eat or being overweight. Notably,
303 those who had received training felt more empowered to educate parents, and some child-
304 minders did report taking on the role of advising parents.

305 ## Discussion

306 Food preferences are shaped early in life (Birch, 1999; Scaglioni et al., 2011) and children's
307 preferences were to the fore in participants' decisions around food provision. Menu choices
308 were to a large degree constrained by children's "*likes and dislikes"*. This constraint is
309 consistent with work exploring food provision by mothers; women will often provide food,
310 which they deem less nutritious in order to achieve harmony within the home and are mindful
311 not to waste food or spend time preparing meals that children will not eat (Charles and Kerr,
312 1988; Slater et al., 2012). Fussy eating among children is a well-recognised phenomenon,
313 and can pose as a barrier to the provision of healthy food (Scaglioni et al., 2011); this effect
314 may be exacerbated when care-givers lack the necessary skills and time to deal with food
315 rejection (Buttivant and Knai, 2012). While participants commonly reported using strategies,
316 such as verbal encouragement to eat and use of food as rewards, these may negatively impact
317 on children's food acceptance (Children's Food Trust, 2012; Scaglioni et al., 2011). If child-
318 minders are to be better equipped to deal with fussy eating and provide food consistent with
319 guidelines, they need to be educated as to effective strategies to counteract food refusal and
320 consideration needs to be given as to their time available to employ such strategies.
321
322 There was widespread acknowledgement that diversity in children's routines coupled with
323 time constraints could negatively impact on food provision. Indeed, the utility of menu plans
324 as recommended (Children's Food Trust, 2012) can be questioned because of irregular
325 routines of care and limited time for food preparation and cooking. In the latter context,
326 parallels can again be drawn with research exploring the food practices of mothers, which has
327 highlighted a reliance on convenience foods (Slater et al 2012; Hartmann, Dohle & Siegrist
328 2013). In accordance with this literature, participants reported serving foods such as *"fish-*
329 *fingers for ease"*. However, some participants seemingly felt more equipped to cope with
330 the time constraints of child-care, and often prepared things in advance that just required re-
331 heating; there was clear variability in cooking and/or organisational skills. There was a
332 general assumption that "cooking from scratch" resulted in provision of superior food; yet
333 many participants were not in fact not "cooking from scratch". This anomaly is congruent
334 with literature in other groups of early years carers; nursery cooks in Liverpool reported using
335 salt-laden stock cubes and pre-made sauces (Lloyd-Williams et al., 2011; Parker et al., 2011).
336 The importance of creating the right atmosphere and the value of eating as a social activity
337 has been highlighted in earlier work exploring food provision in childcare settings (Lloyd-
338 Williams et al., 2011; Moore et al., 2005). Indeed, there is evidence to indicate that the

339 'family meal' is associated with improved nutritional health among children (Hammons and
340 Fiese, 2011) and peer pressure can be used to encourage fussy eaters (Moore et al., 2005).
341 Participants in the current study acknowledged such effects, and there was recognition that
342 for some children the child-minder setting may be their only opportunity to benefit from such
343 a meal.
344
345 Previous work has shown nutritional knowledge to be limited among childcare providers
346 (Lloyd-Williams et al., 2011; Moore et al., 2005; Parker et al., 2011). Consistent with work
347 exploring food practices in nurseries in Liverpool (Lloyd-Williams et al., 2011), participants
348 in the current study had assimilated basic general health eating guidelines, such as *five-a-*
349 *day,* and their food provision reflected understandings of such headline messages. Indeed,
350 while participants emphasised the need for fruit and vegetable provision, vegetables were
351 somewhat lacking within main meals. Moreover, as reported in other early year settings there
352 was sometimes over-provision of fruit (School Food Trust, 2010). In contrast there was good
353 awareness of the inappropriateness of reduced-fat milk, which is at odds with a previous
354 report (Buttivant and Knai, 2012).
355
356 Few participants reported receiving guidance about appropriate food provision for young
357 children. In agreement with earlier research (Centre for Research in Early Childhood and
358 Department of Health, 2010; Moore et al., 2005), most participants relied heavily on
359 experience and intuition. This gap is consistent with previous studies at local level, which
360 report that private providers in particular receive minimal official literature on feeding young
361 children (Lloyd-Williams et al., 2011; Moore et al., 2005). Child-minders relied on advice in
362 relation to the food and nutritional needs of schoolchildren - this practice that has been
363 reported in an earlier study. Furthermore, lack of available training and difficulty in fitting
364 training around other commitments were cited as key barriers to uptake of training in
365 agreement with other work (Centre for Research in Early Childhood and Department of
366 Health, 2010).
367
368 Participants emphasised the benefits of support networks of other child-minders. The
369 potential for network groups to provide support for child-minders has previously been noted
370 (Centre for Research in Early Childhood and Department of Health, 2010).
371 The relationship between childcare providers and parents is recognised to be of the utmost
372 importance (Buttivant and Knai, 2012; Lloyd-Williams et al., 2011), yet research is mixed

373 with regards to the effectiveness of communication. In the current study there was some
374 evidence of discord between providers and parents in dietary objectives and lack of
375 coordination in food provision across the day, in line with other evidence (Briley et al., 1999;
376 Moore et al., 2005). Moreover there was evidence that accommodation of parental food
377 preferences could be a source of tension, concurring with an earlier study, where providers
378 reported squabbles between children at meal-times if they had access to different food items
379 from home (Moore et al., 2005).
380
381 However, more recent work has indicated child-minders view effective communication with
382 parents as a key element of successful practice (Centre for Research in Early Childhood and
383 Department of Health, 2010) and in the current research many participants expressed the
384 desirability of working in *"partnership"* with parents. It has been suggested that parents feel
385 more comfortable approaching their child-minder rather than a health visitor, nurse or other
386 professional and thus can provide a valuable social support service (Centre for Research in
387 Early Childhood and Department of Health, 2010). Furthermore, it has been recognised that
388 childcare providers could play a potentially pivotal role in educating parents as to the tenets
389 of healthy eating (Buttivant and Knai, 2012; Centre for Research in Early Childhood and
390 Department of Health, 2010) and while child-minders in this study were happy to discuss
391 food habits with parents their understandings of healthy eating were insufficient for this role.

392
393 The study has a number of limitations. The timing of the study coincided with OFSTED
394 inspections, as well as a sufficiency audit by RMBC. Recruitment of participants thus proved
395 difficult. Convenience sampling had to be adopted; this may have resulted in selection bias,
396 as interviewees may have different food practices and perspectives from those who declined
397 to be interviewed. The cost of food was notably not reported as a barrier to food provision as
398 previously reported (Moore et al., 2005). A further study of a larger sample, purposefully
399 selected to reflect the broad range of child-minders in the local area would provide a richer
400 source of data, enabling deeper examination and validation of the issues identified and
401 increasing the applicability of the findings to the local context. Moreover, due to the local
402 nature of the study, it is not possible to make generalisations to the wider national context.
403 However, findings are consistent with other regional UK studies of childcare providers
404 (Buttivant and Knai, 2012; Parker et al., 2011).

405 ## Conclusion
406 This study has yielded important information on child-minders' perceptions of healthy eating
407 and the difficulties they encounter in food provision. It has exposed a need for an
408 authoritative set of dietary guidelines for early years children, which are easily accessible to
409 all early years' providers. Practical advice on meal preparation is also necessary, in order to
410 ensure providers are equipped with the skills and knowledge to provide quick and nutritious
411 meals that children will eat. Such education of child-minders would foster an improved
412 exchange with parents around food provision. Network groups can provide an invaluable
413 source of support to child-minders and represent an ideal platform to disseminate
414 professionally based advice on food provision.

415 **References**

416 Audit Commission. (2010), *Giving Children a Healthy Start: Health Report, February 2010*,
417 London, pp. 1–54.

418 Birch, L.L. (1999), "Development of Food Preferences", *Annual Review of Nutrition*, Vol. 19
419 No. 1, pp. 41–62.

420 Bowling, A. (2009), *Research Methods In Health: Investigating Health and Health Services*,
421 McGraw-Hill International, p. 525.

422 Briley, M.E., Jastrow, S., Vickers, J. and Roberts-Gray, C. (1999), "Dietary intake at child-
423 care centers and away: Are parents and care providers working as partners or at cross-
424 purposes?", *Journal of the American Dietetic Association*, Vol. 99 No. 8, pp. 950–954.

425 Buttivant, H. and Knai, C. (2012), "Improving food provision in child care in England: a
426 stakeholder analysis.", *Public Health Nutrition*, Vol. 15 No. 3, pp. 554–60.

427 Centre for Research in Early Childhood and Department of Health. (2010), *Evidence from*
428 *childminder focus groups on promotion of healthy living in home-based childcare, South*
429 *West region*, Birmingham.

430 Charles, N. and Kerr, M. (1988), *Women, food and families.*, Manchester University Press,
431 Manchester, p. 244.

432 Children's Food Trust. (2012), *Eat Better Start Better Voluntary Food and Drink Guidelines*
433 *for Early Years Settings in England – A Practical Guide*, Children's Food Trust:
434 Sheffield pp. 1–78.

435 Crawley, H. (2006), *Eating well for under-5s in child care*, Caroline Walker Trust, St Austell

436 Department for Education. (2012), *Statutory framework for the early years foundation stage*,
437 Department for Children, Schools and Family: Nottingham.

438 Ebbeling, C.B., Pawlak, D.B. and Ludwig, D.S. (2002), "Childhood obesity: public-health
439 crisis, common sense cure.", *Lancet*, Vol. 360 No. 9331, pp. 473–82.

440 Fookes, C. (2008), *Georgie Porgie Pudding and Pie Exposing the truth about nursery food*,
441 London, available at:
442 http://www.soilassociation.org/LinkClick.aspx?fileticket=P7%2F0qfiUPe4%3D&tabid=
443 659.

444 Freedman, D.S., Khan, L.K., Serdula, M.K., Dietz, W.H., Srinivasan, S.R. and Berenson,
445 G.S. (2004), "Inter-relationships among childhood BMI, childhood height, and adult
446 obesity: the Bogalusa Heart Study.", *International Journal of Obesity and Related*
447 *Metabolic Disorders : Journal of the International Association for the Study of Obesity*,
448 Vol. 28 No. 1, pp. 10–16.

449 Geissler, C. and Singh, M. (2011), "Iron, meat and health", *Nutrients*, Vol. 3 No. 3, pp. 283–
450 316.

451 Green, J. and Thorogood, N. (2009), *Qualitative Methods in Health Research*, 2nd ed., SAGE
452 Publications, London.

453 Haines, L., Wan, K.C., Lynn, R., Barrett, T.G. and Shield, J.P.H. (2007), "Rising incidence of
454 type 2 diabetes in children in the U.K.", *Diabetes Care*, Vol. 30 No. 5, pp. 1097–1101.

455 Hammons, A.J. and Fiese, B.H. (2011), "Is frequency of shared family meals related to the
456 nutritional health of children and adolescents?", *Pediatrics*, Vol. 127 No. 6, pp. e1565–
457 e1574.

458 Lloyd-Williams, F., Bristow, K., Capewell, S. and Mwatsama, M. (2011), "Young children's
459 food in Liverpool day-care settings: a qualitative study of pre-school nutrition policy and
460 practice.", *Public Health Nutrition*, Vol. 14 No. 10, pp. 1858–66.

461 Moore, H., Nelson, P., Marshall, J., Cooper, M., Zambas, H., Brewster, K. and Atkin, K.
462 (2005), "Laying foundations for health: food provision for under 5s in day care.",
463 *Appetite*, Vol. 44 No. 2, pp. 207–13.

464 Parker, M., Lloyd-Williams, F., Weston, G., Macklin, J. and McFadden, K. (2011), "Nursery
465 nutrition in Liverpool: an exploration of practice and nutritional analysis of food
466 provided.", *Public Health Nutrition*, Vol. 14 No. 10, pp. 1867–1875.

467 Pearce, S.H.S. and Cheetham, T.D. (2010), "Diagnosis and management of vitamin D
468 deficiency.", BMJ (Clinical research ed.), Vol. 340, No 7738, pp. 142-147.

469 Public Health England. (2012), *National Diet and Nutrition Survey Results from Years 1, 2, 3*
470 *and 4 (combined) of the Rolling Programme (2008/2009 - 2011/2012)*, Vol. 4, pp. 1–
471 158.

472 Robinson, S.M., Crozier, S.R., Borland, S.E., Hammond, J., Barker, D.J.P. and Inskip, H.M.
473 (2004), "Impact of educational attainment on the quality of young women's diets.",
474 *European Journal of Clinical Nutrition*, Vol. 58 No. 8, pp. 1174–1180.

475 Rotherham Metropolitan Borough Council and NHS Rotherham. (2015), *Rotherham Borough*
476 *Joint Health and Wellbeing Strategy 2012-2015*.

477 Scaglioni, S., Arrizza, C., Vecchi, F. and Tedeschi, S. (2011), "Determinants of children's
478 eating behavior", *American Journal of Clinical Nutrition*, Vol. 94, p. 2006S–2011S.

479 School Food Trust. (2010), *Laying the Table Recommendations for National Food and*
480 *Nutrition Guidance for Early Years Settings in England Volume 1*, Vol. 1. School Food
481 Trust: Sheffield

482 Seale, C. (2004), *Researching Society and Culture*, 2nd edn., SAGE Publications: London

483 Slater, J., Sevenhuysen, G., Edginton, B. and O'Neil, J. (2012), "'Trying to make it all come
484 together': Structuration and employed mothers' experience of family food provisioning
485 in Canada", *Health Promotion International*. Vol. 27 No.3, pp. 405-415

486 Strategic Review of Health Inequalities in England post-2010. (2012), *Fair society, healthy*
487 *lives: The Marmot Review*, *Public Health*, Vol. 126 Suppl, pp. S4–10.

488 The Health and Social Care Information Centre. (2013), "National Child Measurement
489 Programme: England, 2012/13 school year", The Health and Social Care Information
490 Centre: London.

491 Wiles, N.J., Northstone, K., Emmett, P. and Lewis, G. (2009), "'Junk food' diet and
492 childhood behavioural problems: results from the ALSPAC cohort.", *European Journal*
493 *of Clinical Nutrition*, Vol. 63 No. 4, pp. 491–498.

494 World Cancer Research Fund. (2007), *Food, nutrition, physical activity, and the prevention*
495 *of cancer: a global perspective.*, *World Cancer Research Fund and American Institute*
496 *for Cancer Research*, American Institute for Cancer, Washington, DC pp. 289–295.

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