How children eat may contribute to rising levels of obesity
Children's eating behaviours: An intergenerational study of family influences

By Nicky Kime, Research Officer, Centre for Health Promotion Research, Leeds Metropolitan University, LS1 3HE, UK

Key words: children's eating behaviours; obesity; family environment; intergenerational; grounded theory; ordering of eating.

Abstract

The term ‘obesogenic environment’ is rapidly becoming part of common phraseology. However, the influence of the family and the home environment on children’s eating behaviours is little understood. Research that explores the impact of this micro environment and intergenerational influences affecting children’s eating behaviours is long overdue.

A qualitative, grounded theory approach, incorporating focus groups and semi-structured interviews, was used to investigate the family environment and specifically, the food culture of different generations within families.

What emerged was a substantive theory based on ‘ordering of eating’ that explains differences in eating behaviours within and between families. Whereas at one time family eating was highly ordered and structured, typified by the grandparent generation, nowadays family eating behaviours are more haphazard and less ordered, evidenced by the way the current generation of children eat. Most importantly, in families with an obese child eating is less ordered compared with those families with a normal weight child.

‘Ordering of eating’ is a unique concept to emerge. It shows that an understanding of the eating process is crucial to the development and improvement of interventions targeted at addressing childhood obesity within the family context.

Introduction

The number of people, both adults and children, who are obese continues to rise throughout the world. According to the International Obesity Task Force (IOTF), within the UK, obesity prevalence has more than tripled in the past 25 years, and obesity among children has tripled in a decade (IOTF 2003). The Department of

Health (DOH) estimates that if no action is taken, an estimated one in five children will be obese by the year 2010 (DOH 2006). As Purvis states, “children, with their fastfood diets, school runs and Playstation lives, are vulnerable as never before. For the first time in history, they risk being outlived by their parents and developing the illnesses of middle age whilst still young” (2005, p2).

Whilst it is recognised that the factors responsible for obesity’s predominance in current society are both numerous and complex, the increasing importance of the environment in preventing and controlling obesity has become widely acknowledged. As Peters et al suggest, “because of the overwhelming effect of the modern environment, obesity can be viewed as more of a socio-cultural disorder than as a failure of biological mechanisms” (2002, p70). Even though references to a toxic or obesogenic environment are now commonplace (Swinburn *et al* 1999), one aspect that remains largely unexplored is the micro environment of the home. The family is of primary importance in socialising and controlling what children eat and yet the impact of family life on children’s eating behaviours is a largely neglected area of research. Previous research has examined the family environment, in respect of parental control in relation to food, eating and food rules (Robinson *et al* 2001; Patrick and Nicklas 2005) and several interventions aimed at obesity prevention do incorporate work with families (Ludvigsen and Sharma 2004; Rudolf *et al* 2006; Foresight 2007). However, there is little emphasis on the culture of food and eating within the family home, specifically the ***how*** of eating. In general, the majority of interventions are seemingly school-based (Sahota 2002; Haerens *et al* 2006) and increasingly, attention is focused on the wider macro environment, which is external to the family. In reality, little is known about how the influence of the school or the wider obesogenic environment is mediated in the home. Indeed, Egger and Swinburn suggest the macro and micro environmental influences affecting people’s food intake are “vast and underrated” (2002, p189). There are a whole range of complex factors that interact in such a way that some children become obese and

others do not. In addition, how these factors have changed, or not, over time is little understood. This paper argues that research needs to focus on the broader influence of the home environment and address *how* families eat, not simply *what* they eat, since this has important implications for childhood obesity. By refocusing attention on a fundamental aspect of eating, the eating process, the intention of this paper is to increase awareness of an important but undervalued research area.

Methodology

In recognition of the fact that the family environment has an important role to play in addressing the childhood obesity epidemic, the research set out to investigate family eating cultures and was most concerned with a desire to explore the how of eating within an intergenerational context. This was achieved using a qualitative methodology that employed a grounded theory method. It was decided that such an approach was the most appropriate way forward for in-depth and explorative research of this kind that was largely based on inductive principles. It is beyond the remit of this paper to go into further methodological detail, however, such detail has been reported extensively elsewhere (Kime 2007).

The aim of the grounded theory approach was, therefore:

1. To generate a grounded theory that explained eating behaviours amongst different generational groups, both within families and between families.

Within the overall aim of the research there were two main objectives:

1. To explore food and eating, together with influential factors, within different generational groups.

2. To explore family food and eating, the development of related attitudes and behaviours and their possible contribution to childhood obesity.

The research process was divided into two parts, phase 1 and phase 2, both guided by theoretical sampling. Theoretical sampling dictates the whole research process in the sense that there is a cycle of alternation between data collection and data analysis. According to Strauss and Corbin (1998) different sampling strategies should be adopted at different stages of the research. Initially, the process is iterative where purposive sampling is carried out using predetermined criteria based on the research question. Then, as data are analysed further, decisions regarding sampling are guided by emerging directions in the analysis. In this way, theoretical sampling occurs when the researcher collects new data deliberately to test emerging concepts.

Phase 1

The aim of phase 1 was to explore family food and eating practices generally in different generations and examine how these processes have changed within the context of the macro environment. Phase 1 involved focus group discussions with separate generational groups and these were conducted between March and July 2005. Ethical approval for this phase of the research was obtained from Leeds Metropolitan University. One hundred and eighteen participants were recruited to take part in the focus group discussions, mainly using the assistance of gatekeepers from various community organisations. Focus group participants were recruited from three sectors of the population, comprising three generational groups, grandparents, parents and children, not necessarily from the same family. Children aged eleven and twelve, parents of children any age and grandparents of any age formed the research populations. As the research progressed and initial data were analysed, further participants within each generational group were chosen in order to provide additional illumination of the research topic and the developing theory.

Phase 2

The aim of phase 2 was to develop further the work achieved in phase 1. The intention was to examine the food and eating habits of three generations within the same family in order to assess the impact of the family on the development of attitudes and behaviours in respect of children's eating and determine what had changed between generations. This involved an in-depth investigation into the food culture of a) families with an obese child and b) families with a normal weight child, within a shared macro environment that is recognised as being increasingly obesogenic. However, this was essentially an exploration on a micro scale since it focused on the family and the home environment. Data collection occurred between May and August 2006. Nine families participated and a total of twenty-seven one-to-one, in-depth interviews were conducted, nine with each generation. Families with a normal weight child were recruited through the focus group discussions conducted in phase 1 and gatekeepers from various community organisations. Families with an obese child were recruited through WATCH IT (Rudolf *et al* 2006), a programme for overweight children and teenagers in Leeds. Full ethical approval was gained from the Central Office for Research Ethics Committees (COREC). Recruitment aimed to have a balance of three-generational families, equal numbers of families with an obese child and families with a normal weight child, in order that comparative data could be sought and an exploration of the theory relating to the families of both groups of children could be conducted.

Results

All interviews were transcribed and then analysed using both manual techniques and the qualitative software package, NVivo. Different coding strategies, characteristic of recognised grounded theory procedure, were employed as a means to generate

theory. Transcription and analysis were, as far as possible, done concurrently in line with theoretical sampling.

Findings from Phase 1

The findings from phase 1 identified ‘order’ as a pivotal concept in achieving greater understanding of the role of food and eating within people’s lives. This concept of order is now examined within the context of the three generational groups: grandparents, parents and children.

Grandparents

In the grandparent’s generation there was a definite routine or ‘ordered eating’ pattern. As with everything else that constituted daily life, eating was an ordered activity, in the same way that going to work and school or doing the laundry were ordered activities. In reality, this routine of ordered eating encompassed all other daily activities and just as there was one way of eating there was one way of living; the two were synonymous.

> Anne: “All the different modes and possibilities compared, there just used to be one way of eating, didn’t there really” (Grandparents’ Focus Group (GPFG) 3).

An ordered lifestyle incorporated ordered mealtimes and regulated food patterns. Equally, ordered eating dictated and controlled all other daily activities. It was the one activity around which people structured everything else and it constituted the basic framework of their lives. The importance of mealtimes and the significance attached to them was exemplified by people’s expectations. There was an expected way of behaving that adhered to a set pattern and was itself ordered. Family

members ate together and they ate in the same room and at a table, without external influences such as television. There was an inherent value attached to these occasions where eating and time together as a family were the main focus.

> Maureen: “We all ate at set times…We had a big table that we all sat round and yeah, everybody knew what time my dad was getting in so we’d eat at whatever time it was. Probably 6 o’clock and we all had breakfast together. At weekends we all had lunch together” (GPFG4).

In the same way that the mealtime routine was always the same, an ordered food routine existed, in terms of what food was eaten and when. Rarely was food eaten outside of mealtimes and treats were given only on rare occasions. Snacking was not encouraged, nor was eating outside of the home - either in the street or in a restaurant - because these activities deviated from the accepted way of eating that was primarily in the home and, as such, was ordered and controlled. The implication was that other eating behaviours, in particular, eating in the street, were somehow symbolic of behaviour that was deviant, out-of-order and out of control.

> Dorothy: “The way you see youngsters, teenagers walking along the road, stuffing their face with a…”
> Malcolm: “We weren’t allowed to eat in the street, were we?”
> Dorothy: “No, no and these are walking along”
> Pat: “They’re all coming out and standing eating in the street!” (GPFG4).

Ordered eating was reinforced by food availability. The consensus was that availability represented an important factor constraining what people could buy and eat, and, therefore, limiting them to a particular routine. Grandparents stressed how food was plain and simple, especially during the war years, and how eating was a straightforward activity, simply because there was little choice.

> Dorothy: “We always had plenty to eat”
> Frank: “Yeah, but whilst you say plenty, you couldn’t say bacon and eggs, steak and tomatoes or…”
> Mary: “We didn’t have the variety that we have today” (GPFG4).

The grandparents suggested that people were more in tune with what they were eating and there was a real sense of food appreciation where ‘real food’ and ‘real eating’ formed the basis of a food culture that relied heavily on order and continuity. However, grandparents spoke of greater choice and more freedom to choose following the war, two themes that were increasingly emphasised in the post-war consumer ethos. Ordered eating as an established form of behaviour began to be challenged from this moment on.

Parents

Parents reported that when they were children, ordered eating continued to be strongly in evidence. A set routine for food and eating remained a priority. In the same way that grandparents referred to an established pattern of food choice and mealtimes, parents also referred to a structured eating pattern. The following comment was typical and exemplifies the fact that eating was ordered and controlled,

> June: “We had a set menu every week and so I know now what we had on a Monday, Tuesday, Wednesday, etc” (Parents’ Focus Group (PFG) 1).

As well as having certain foods on certain days, mealtimes tended to be at similar times each day and, in addition, they were family occasions. Eating as a family meant that mealtimes were usually formal gatherings where there was a specific order of behaviour.

> June: “Yeah, elbows had to be off the table. Actually, when I say they were a social occasion, we weren’t encouraged to talk much. I remember we were together but, and there’d be a bit of information going across but, it wasn’t a social occasion. I know my father always got first choice of cake, or whatever was for pudding, Battenburg. When he’d got his, the rest of us got ours and we all had our set places. We all sat in the same place” (PFG4).

It is apparent that there was an order to all aspects of eating, from the order of foods to be eaten in a week right through to the order in which family members were served their food. However, these behaviours did not necessarily continue. At some point there has been a change in emphasis regarding people’s attitudes towards food, accompanied by a shift in eating behaviours; participants were conscious of this change having occurred. Although no single explanation could be given for this general change in attitude and behaviour towards food and eating, participants from all three generations identified potential contributory factors. Participants reported that differences in eating have evolved and at the same time eating in its most traditional sense has been eroded. In terms of the factors that have led to this

‘erosion’, the research found that there were indeed certain influences which were responsible for challenging people’s attitudes towards food and the extent to which ordered eating continued to form part of daily life. When these factors are considered as a whole it is easier to see how they have led to an increasing acceptability of different eating scenarios that represent the norm for the current generation rather than an ordered way of eating.

Firstly, grandparents alluded to the fact that eating routines began to break down as a result of greater choice and freedom to choose what to eat; the parents confirmed this. Parents spoke of a wider choice of food, which led to greater freedom in terms of what to eat but also when and where to eat.

Secondly, people’s expectations were changing as a result of increased availability and greater choice and this impacted on ordered eating. People became active consumers, receptive to new ideas and willing to try different foods. For the first time they had real choices to make rather than taking passively from a limited range of products.

> Sarah: “When ‘Angel Delight’ came out that was just like fantastic, to have a different sort of pudding, other than the homemade apple pie and custard and stuff…they were a fantastic revelation” (PFG2).

Thirdly, with the increase in accessibility to foods that were less time consuming to prepare, more time was available to do other activities. This, coupled with people’s changing expectations and attitudes, meant that food was no longer the main focus. Since people’s lives were no longer constructed around the planning, buying, preparation, or eating of food, it was inevitable that the singularly recognisable and ordered way of doing things would disappear.

> Rachel: “I think there probably is a difference. Things were much calmer. Parents didn’t go out eating or socialising down the bar…we never went out. You just didn’t go out. There’s so much to do now. I think people do too much really…so they eat…”
> Dawn: “Food is just shoved in when they can” (PFG4).

Finally, the macro environment was partly responsible for bringing about a change in people’s attitudes towards food, which affected the extent to which ordered eating continued to form part of daily life. In the grandparents’ generation, the macro environment, i.e. food advertising and marketing, was conspicuously absent compared with current society where it is strongly in evidence.

> Chris: “I’m certain I never saw a McDonald’s till I went away to college and I think that one of the things that’s changed is the sort of consumerism trend, commercial strength of these big organisations” (PFG3).

Children

In accordance with grandparents’ perceptions, the research has found that concepts of order as applied to lifestyle and an individual’s sense of order have seemingly changed and, in so doing, have impacted on the way in which children regard food and eating. Unwritten rules concerning ordered eating, affecting what and how people eat, seem to have largely disappeared. The biggest recognisable outcome of this is that there no longer appears to be a universal structured eating pattern. In effect, this means that often a family food routine does not exist; rarely are meals eaten at the same time each day and mealtimes are not necessarily family occasions.

> Mark: “We only eat together like once a week unless I’m at my dads, then we eat together. But we never eat at a table. Most of the time my mum’s on the computer or I’m upstairs or something. We normally eat from like 5 o’clock onwards, anytime. It doesn’t really matter and I snack a lot in between. Crisps and biscuits and sometimes fruit” (Children’s Focus Group (CFG) 1).

Even though many families did not eat together, when they did it was surprising to discover that children were expected to behave in a certain way. Children were aware of table manners and knew exactly what the boundaries were, in terms of what behaviour was, or was not, acceptable. Many children were expected to behave in just the same way as the grandparents’ had, for example, eating with mouths closed, remaining at the table until finished and eating quietly, even though some children considered these behaviours to be too formal and out-of-step with modern thinking.

> Lucy: “My mum’s really old fashioned and she makes me not put my elbows on the table and eat with my knife and fork and…” (CFG4).

Even if families regarded eating together as a priority there were often factors that conspired against this becoming a reality. These factors included greater choice, increasing independence amongst children, dominance of leisure activities and parents’ increasing workloads. Children recognised that eating habits are different because of the increased choice. As this dialogue illustrates, they appreciated that more choice exists due to a variety of factors, and not simply because there is greater availability in the shops.

> George: “More ready-meals and more chocolate”
>
> Jane: “Yeah, like McDonald’s and that”
>
> Elizabeth: “They used to eat much more fruit and vegetables”
>
> Tom: “We have a lot more sweet stuff and exotic things from other countries like Chinese food and…”
>
> Jane: “My mum didn’t eat Chinese when she was young; I do” (CFG5).

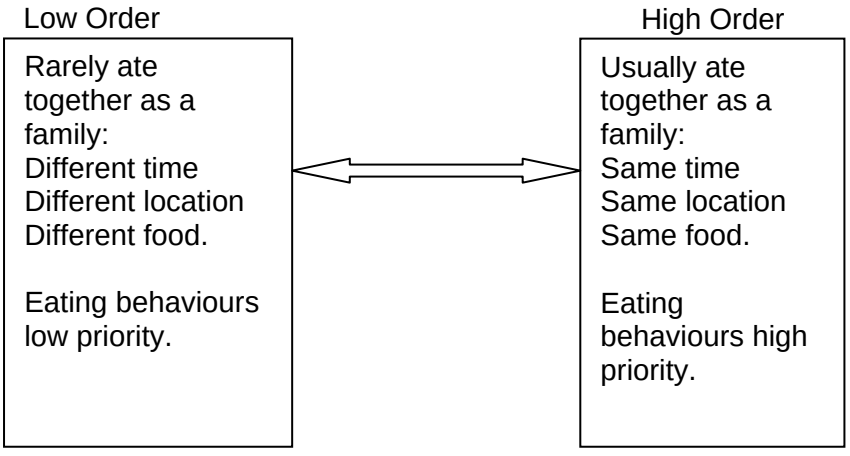
Unlike in previous generations, for the current generation of children there was nothing unusual about eating processed meals, fast food and so-called ‘foreign’ foods. It was clear from talking to the children that modern social attitudes now accord them with greater responsibility and autonomy. They are regarded as citizens with rights and, in this context, are encouraged to make their own choices, deciding for themselves what and how they eat.

Findings from Phase 2

A grounded theory approach was used to develop an ‘ordering of eating’ theory that formed the basis of the findings for phase 2. This theory highlights the variation between families concerning differences in the way in which food and eating is structured and the extent to which these two variables are ordered within family life. Firstly, there were more changes in eating behaviours, from the time when grandparents were children to the current generation of children, in those family environments with an obese child than in family environments with a normal weight child. Secondly, eating was a less ordered activity in those family environments with an obese child than in family environments with a normal weight child.

This is best explained using a spectrum of ordering of eating (see Figure 1) where eating behaviours were highly controlled at one end and more laissez-faire at the other. If ordering of eating is viewed in this way there is no single order as such, rather there are many different degrees of order in between either extreme on the spectrum. At one end is a high degree of order, exemplified by the family who aimed to eat together on most days and in the same place. For these families the act of eating and specifically how they ate was equally as important as the actual food they ate. Alternatively, at the other end of the spectrum is a low degree of order, exemplified by the family who did not prioritise eating together. Rather, this extreme of ordering of eating manifested itself in family members choosing different foods to eat, eating at different times and often eating in different places within the home, even when all members of the family were present in the home at the same time. In addition, eating behaviours were secondary to the actual food consumed. Figure 1 illustrates this spectrum of ordering of eating as demonstrated in the findings. Each of the families interviewed exhibited different eating behaviours, all of which were indicators of different levels of order along this continuum.

Figure 1 Spectrum of ordering of eating



Ordering of eating as a concept implies there are many different manifestations of order, in terms of its expression within different families, and as such it encompasses the diversity of eating that is apparent from both an intergenerational and an intrafamilial perspective. The research found that families develop their own eating patterns as do generations within families but, nevertheless, these ways of eating can all be placed on a spectrum of ordering of eating. Differences within families (intra-family variation) and also between families (inter-family variation) emerged.

Intra-family variation

In terms of the differences within families, the findings from Phase 2 reinforced the key issues that emerged from Phase 1, in particular a greater level of ordered eating in the grandparent generation throughout their life course compared with the current generation of parents and children. This was evident in families with an obese child as well as families with a normal weight child.

Inter-family variation

As far as the variation between families was concerned, the biggest recognisable difference was that the eating habits of the obese children exhibited less order compared with the eating habits of normal weight children.

For the normal weight children, food and eating was part of a family life that reflected an ordered regime of sorts and was more aligned to the ordered eating behaviours of previous generations, especially those of their grandparents. In comparison, there was a greater contrast in eating behaviours between the grandparent generation and the current generation of children within the families of obese children. There was little apparent order and food and eating was organised on a more haphazard basis.

The research found that for the normal weight children it was common practice to eat in an ordered environment, typically referred to as a more traditional way of eating, with its associated formalities and constraints, but also one that 'normalised' the eating process. Characteristically, this involved eating three meals a day, at a table and with other members of the family, although not necessarily with parents.

> Child: "We sit down at the table…we sit down all together…and we sit down until we've all finished".

There were occasions when children did not eat at a table and were instead allowed to eat meals on their laps. However, this behaviour was always permitted within the context of what was expected normal behaviour, both for the family and implied within society. Ordered eating as a cohesive family unit was still upheld as the benchmark and, therefore, a goal to work towards, even if not practised every day. For those families with a normal weight child, an ordered way of eating was part of a family life that was structured, however chaotic that structure appeared to be. Even in the busiest of households, a framework of sorts existed, which meant that there was a routine for shopping, cooking and eating.

In contrast, the obese children mainly ate in an unstructured family environment. This was characterised by eating in different places, hardly ever at the table, with different family members and at different times, although still predominantly in the family home. Because eating did not necessarily conform to a particular kind of order, it tended to be more of an informal occasion without the accompanying constraints, but this also meant that it was not a habitual feature of daily family life. There was no standard that represented the norm and, therefore, the pattern of eating was irregular.

> Child: “She’ll probably sit in there (in the dining room)…my mum’ll probably sit there (at the computer)…my grandma sit there (on the sofa), Amanda will lie there (on the living room floor) and I’ll sit here (in the chair) all in front of the television…dad in the loft working on the computer”.

There were exceptions to this when families tried to eat together at a table. Indeed, they seemed to recognise the value of ordered eating such as this. However, the implication was that it was a rarity, something to be reserved for a specific occasion, for example Sunday lunch, rather than normal everyday eating.

Discussion

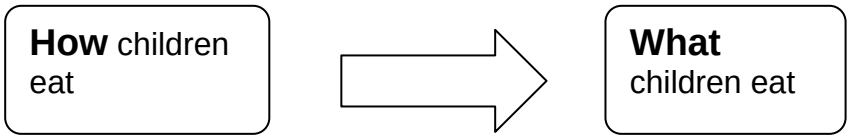
Ordering of eating, in terms of the family and how eating is structured within different generations, is an original theory to emerge and as such represents an important aspect of the how of eating that demands further investigation. The intergenerational aspect of this study represents a key component of the research in that ordering of eating has been shown to change over the generations, regardless of whether or not families have children who are obese. Essentially, families in this research changed from being more ordered and in particular, more ordered in terms of their eating behaviours, typified by the grandparent’s generation, to being less ordered, typified by the current generation of children. In addition, families who were once characterised by their similarities in eating rather than their differences, both within families and between families, nowadays exhibit more differences. Accordingly, these differences are reflected in ways of eating or more specifically, ordering of eating within families. As far as the theory of ordering of eating is concerned, the research has found there have been more changes and consequently less order, in relation to eating within those families with an obese child than those families with a

normal weight child. Therefore, it is reasonable to hypothesise that the development of childhood obesity is linked in some way to this change in eating and although not formally tested in this research, there is a relationship between the ***how*** of eating and the ***what*** of eating. This research has examined what represents an 'ordinary ' aspect of modern life and consequently, a theory has emerged explaining children's eating behaviours within different families. Most importantly, this research reinforces 'commonsense' explanations of changes in eating styles ***and*** at the same time identifies key differences in 'obese' families.

The latest NICE guidelines state "the prevention and management of obesity should be a priority for all, because of the considerable health benefits of maintaining a healthy weight and the health risks associated with overweight and obesity" (2006, p4). However, the current evidence base places greater emphasis on the what of eating, for example, The Balance of Good Health Model, rather than on the how of eating. As a result, a whole range of eating behaviours is evident and increasingly acceptable. In addition, the obesity epidemic is increasingly demonising food (distinguishing between good and bad foods), as opposed to thinking about eating behaviours and the potentially adverse consequences of certain ways of eating on children's immediate and long-term health.

Although it is widely accepted amongst policy-makers and researchers that the ultimate goal is to achieve a healthy balanced diet at a population level, it seems that extant research and interventions, which increasingly emphasise food, may not be the solution, given that obesity rates continue to rise. Ordering of eating is proposed as an alternative way of working towards achieving the ultimate goal, since it re-orientates thinking towards the how of eating as an intermediary variable for determining what is eaten (see Figure 2).

Figure 2 Eating Process



Given that ordering of eating is part of a strategy focusing on long-term lifestyle changes and “long-term lifestyle changes” (NICE 2006, p7) is formally recognised in the NICE guidelines as supporting best-practice standards, there is an argument for making the how of eating more explicit within the key recommendations.

Due to its complexity there is no universally accepted approach for preventing childhood obesity, just as there is no established evidence base for what works in treating childhood obesity. Indeed, this is reflected in the current guidelines, where a wide-ranging set of strategies is proposed for tackling obesity. As Anderson states, “what we know for sure is related more to the clinical problems and manifestations of comorbidities associated with obesity than how to change the behaviours and environment which facilitate and support the development and maintenance of the problem” (2005, p1). Furthermore, Rugg adds, “there appears to be no robust evidence on the effectiveness of interventions on which to base national strategies or to inform clinical practice” (2004, p30). Even when so-called advances, in terms of understanding the causes of obesity, are used to inform the development and implementation of interventions, Goldberg argues, “the management and treatment is often unsuccessful in the long term” (2003, p347). It is suggested that one reason for this is those interventions which focus directly on a healthy diet may fail to address those factors that determine it. This research indicates that there are additional possibilities, in terms of developing interventions that can complement existing strategies by focusing on order as an important influence on diet.

Rather than completely disregarding current strategies it is more appropriate to focus on ways in which ordering of eating at a practical level can be incorporated into existing programmes aimed at preventing and managing childhood obesity. Within the family, ordering of eating seems to have a direct influence on what is eaten and also a mediating influence at the micro level on negative influences within the wider obesogenic environment. Therefore, work that concentrates on ordering of eating within the family setting is an important consideration.

The ecological framework, which encourages health problems to be approached on a multi-level context beginning with the family (Novilla *et al* 2006) could be used to identify and foster greater collaboration between health promotion partners. Peploe et al support an ecological approach, maintaining, "the evidence-base shows interventions that are effective in promoting a healthy diet are those which use different approaches which operate at a range of different levels - with individuals, groups and the wider community" (2003, p365). Using this model, it would be appropriate for current initiatives, for example, Sure Start Children's Centres, to be involved in interventions aimed at family eating, as well as those who are outside of the more traditional remit, such as architects and urban planners. As part of a long-term goal work could begin in this area with early-life interventions, so that a focus on family eating behaviours is seen as an extension of current antenatal and health visiting initiatives. This work could then be extended through appropriately trained health professionals, such as dieticians and primary health care workers, who would be able to provide information and contribute to skill development. In addition, they could help to establish a supportive environment in which information is given and appropriate skills are developed, including for example, those relating to budgeting, shopping and cooking. As far as the management and treatment of childhood obesity is concerned, any approach is likely to be very time intensive but there is the potential capacity for current programmes, such as WATCH IT (Rudolf *et al* 2006) and MEND (Sacher *et al* 2005), which work with obese children and their families, to

extend the services they provide. This means that, in addition to a focus on foods, resources could be put in place to address ordering of eating within the home. For example, this might include looking at how families organise their shopping, cooking and eating.

Finally, guided by the ecological framework, appropriate policies could link the family more closely with their larger social system and facilitate a more supportive environment for health. In the case of ordering of eating this represents an environment that is more conducive to eating behaviours that is aligned to ordered eating rather than disordered eating. Current initiatives that are characteristic of a supportive environment include food co-ops and delivery programmes, cooking clubs, community cafes and growing schemes. These help to encourage family members to be more proactive in making decisions around food and in addition, foster a greater responsibility for family eating behaviours.

Conclusion

Ordering of eating, and specifically, disordered eating, or chaotic food and eating routines as a focus for behaviour change, adds to our knowledge and understanding of eating behaviours and also represents a new dimension to be considered as far as family health and the family as a context for health promotion is concerned. The home environment is regarded as the most important place where health behaviours are learned and maintained (Swinburn and Egger 2002). Therefore, it follows that it is also the place where efforts need to be concentrated in order to effect change. It is essential that research rises to the challenge and considers the best way to approach ordering of eating within the family context, not least for those researchers and practitioners involved in promoting health within the family, but most importantly, for the health of the family members themselves.

References

Anderson, AS (2005). Obesity prevention and management - evidence and policy. *Journal of Human Nutrition and Dietetics*, **18**(1), 1-2.

Department of Health (2006). Choosing Health: Obesity Bulletin Issue 1 (http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/Obesity) Accessed 20 August 2007.

Foresight (2007). Trends and drivers of obesity (http://www.foresight.gov.uk) Accessed 17 January 2008.

Goldberg, G (2003). Flair-Flow 4: synthesis report on obesity for health professionals. *Nutrition Bulletin*, **28**(4), 343-354.

Haerens L, Deforche B, Maes L, Cardon G, Stevens V and De Bourdeaudhuij I (2006). Evaluation of a 2-year physical activity and healthy eating intervention in middle school children. *Health Education Research*, **21**(6), 911-921.

International Obesity Task Force (2003). Seeking bold solutions; International Obesity Task Force (http://www.iotf.org/media/IOTFNov11briefing.pdf) Accessed 28 March 2008.

Kime, N (2007) *Children's eating behaviours: An intergenerational study of family influences.* PhD thesis, Leeds Metropolitan University.

Ludvigsen A and Sharma N (2004). Burger boy and sporty girl (http://www.barnardos.org.uk/burger_boy_report_1.pdf) Accessed 17 January 2008.

National Institute for Clinical Excellence (NICE) (2006). *Obesity: the prevention, identification, assessment and management of overweight and obesity in adults and children*. NICE clinical guideline **43**. December. NICE, 1-80.

Novilla ML, Barnes MD, De La Cruz NG, Williams PN and Rogers J (2006). Public Health Perspectives on the Family: An ecological approach to promoting health in the family and community. *Family Community Health*, **29** (1), 28-42.

Patrick H and Nicklas TA (2005). A Review of Family and Social Determinants of Children's Eating Patterns and Diet Quality. *Journal of the American College of Nutrition*, **24**(2), 83-92.

Peploe K, Crombie H and Doyle N (2003). Making the most of policy opportunities: developing strategies to promote healthy eating. *Nutrition Bulletin,* **28**, 364-368.

Peters JC, Wyatt HR, Donahoo WT and Hill OJ (2002). From instinct to intellect: the challenge of maintaining healthy weight in the modern world *Obesity Reviews,* **3**(2) 69-74.

Purvis A (2005). Sausage, Mash and Sustainability. *Green Futures*. Special Supplement, November/December, 1-24.

Robinson TN, Kiernan M, Matheson DM and Haydel KF (2001). Is parental control over children's eating associated with childhood obesity? Results from a Population-Based Sample of Third Graders. *Obesity Research*, **9**(5), 306-312.

Rudolf M, Christie D, McElhone S, Sahota P, Dixey P, Walker J and Wellings C (2006). WATCH IT: a community based programme for obese children and adolescents *Archives of Disease in Childhood,* **91**, 736-739.

Rugg K (2004). Childhood obesity: its incidence, consequences and prevention. *Nursing Times*, **100** (3), 28-30.

Sacher P, Chadwick P, Wells JCK, Williams JE, Cole TJ and Lawson MS (2005). Assessing the acceptability and feasibility of the MEND Programme in a small group of 7-11 year-old children. *Journal of Human Nutrition and Dietetics*, **18**(1), 3-5.

Sahota P (2002). *Obesity: An intervention in the Primary School Setting*. PhD dissertation, University of Leeds.

Strauss A and Corbin J (1998). *Basics of qualitative research- techniques and procedures for developing grounded theory*. London, UK: Sage.

Swinburn B and Egger G (2002). Preventive strategies against weight gain and obesity. *Obesity Reviews*, **3**(4), 289-301.

Swinburn B, Egger G and Raza F (1999). Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity *Preventive Medicine,* **29**(6 Pt 1), 563-570.

Address for correspondence

Dr Nicky Kime
Centre for Health Promotion Research
Leeds Metropolitan University
Calverley Street
Leeds LS1 3HE
UK
Email: n.kime@leedsmet.ac.uk