# Children's eating behaviours: the importance of the family setting

## Abstract

Childhood obesity has become a major public health challenge. Whilst it is accepted that the aetiology of obesity is complex, there is very little that targets the home environment and specifically looks at the family setting and how this influences children's eating behaviours. This research aimed to redress the balance by alerting people to the importance of the family environment as a contributory factor for childhood obesity. Using a grounded theory approach, 'Ordering of eating' highlights the importance of the family setting and demonstrates how micro and macro order influences the development of children's eating behaviours.

**Key words/phrases: Leeds, UK; children's eating behaviours; grounded theory; family environment; intergenerational; ordering of eating.**

## Introduction

Childhood obesity has become a major public health challenge. During the past two decades the prevalence of obesity in children has increased on both a national and global scale meaning the incidence of childhood obesity is now at record levels. In England, childhood obesity rose by almost 5% between 1995 and 2004 and if no action is taken, an estimated one in five children will be obese by the year 2010 (Department of Health (DOH), 2006). This has implications in terms of the enormous burden that obesity places on society, with the total estimated cost of obesity plus overweight at a figure in excess of £6.6 - £7.4 billion (Health Select Committee, 2004). In the UK the tax burden due to diet-induced ill health has been estimated as high as £15 billion a year (IOTF, 2003). In the US, it is expected that 19% of GDP will be spent on healthcare by 2014 (Heffler et al, 2005); of this, 20% will be devoted to treating obesity diseases (Hewitt, 2004).

Whilst it is accepted that the aetiology of obesity is complex, reasons for its rising prevalence that previously focused on the individual now identify it as predominantly a societal problem where the environment is held responsible. References to a toxic or obesogenic environment are now commonplace, with obesogenic environments defined by Swinburn et al as "the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations" (1999, 564). It has been demonstrated that policy can help to create supportive environments where people feel able to maintain healthy lifestyles, for example in the case of the smoking ban in public places and workplaces. However, a gap still remains between rhetoric and translation of policy into action as far as controlling the obesity epidemic is concerned. As Peters et al state, "nearly every aspect of both the modern built environment and our modern lifestyle inadvertently promote obesity" (2002, 71). Although the importance of the environment in preventing and controlling obesity is acknowledged, the home environment is largely unexplored. In contemporary literature there is some recognition of the potential link between the family setting and its influence on children's eating behaviours. For example, in the Foresight report (2007) it is acknowledged that any investigation of those circumstances that support healthy eating necessarily needs to focus on the family setting as well as the wider environment. In addition, a report by Ludvigsen and Sharma (2004) highlights the importance of investigating the family as far as its influence on children's food choice is concerned. However, even these reports do not go far enough; they fall short of addressing the effect that the family environment has on children's eating behaviours. Furthermore, as the Cochrane Collaboration (Summerbell et al, 2006) identifies there are few practical interventions that concentrate on eating behaviours within the home. The Cochrane Collaboration

found that although some environmental issues had been addressed and government initiatives had been implemented, there are no interventions that address the impact of the family environment on children's eating behaviours. The intention of this paper is to raise awareness of the importance of the family as a setting, not only for increasing our understanding of eating behaviours, but for the contribution that these findings have to make to the ongoing debate surrounding childhood obesity and its causes.

## The family setting

In any discussion of obesity, it is widely recognised that the home environment and specifically the influence of the family is central to the debate surrounding obesity and its causes. Some would go so far as to say that the home environment is undoubtedly the *most* important setting in relation to shaping children's eating behaviours (Swinburn and Egger, 2002). However, surprisingly little is known about the home environment and the family influences that have an impact on children's eating behaviours, which in turn may contribute to childhood obesity.

The World Health Organisation defines settings for health, of which the home is one, as the place of social context in which people engage in daily activities where environmental, organizational and personal factors interact to affect health and well being (WHO, 1986). 'Settings for health' is appropriately labelled as 'supportive environments for health' in the Ottawa Charter for Health Promotion and as such represents one of its five key strategies for promoting health. This is in recognition of the fact that many determinants of health are setting specific and the notion of health is created in the relationship between individuals and their environments (WHO, 1986). The settings approach reinforces the assertion that people are not definable solely by their 'risk identities', for example, as smokers, diabetics, obese, etc. (Kickbusch, 1995).

In terms of implementing and managing interventions, hospitals, workplaces, schools and homes are all acknowledged as being major influential social structures that provide mechanisms for reaching defined populations (Mullen et al, 1995). However, although hospitals, workplaces and schools, have been recognised as important settings for the promotion of healthy eating behaviours, it seems that the home setting has yet to receive full recognition for the part it can play in determining healthy eating behaviours (Green et al, 2000). The home setting is very much in the shadow of schools where an enormous amount of attention has been directed at the quality of school food and the eating environment, largely as a result of Jamie Oliver's campaign to turn around school meals (Oliver, 2006).

Yet, it is within the home that health behaviours are learned and maintained and where children develop most of their strategies for interacting with the environment. Even accounting for the fact that the family has traditionally been of primary importance in socialising and controlling what children eat there is still a need for a better understanding of the ways in which families operate as well as the ways in which they can and do take an active part in their own health. As the Barnardo's report (Ludvigsen and Sharma, 2004) identifies, the structure of the family is constantly changing as society itself changes which is having an effect on the ways in which families operate in relation to food and eating. According to Ludvigsen and Sharma (2004) families are becoming increasingly democratic which may explain why children have a greater say in terms of what, when and how much they eat. Furthermore, the Foresight report suggests, "traditional influences of parents and families are being eroded…which may mean for many communities that unhealthy lifestyles have become the norm" (2007, 9). Maio (2005) reiterates this point when he suggests that rebuilding the cohesive family is important for creating healthier eating environments.

Families do not operate in a vacuum and therefore, there is a need to understand the wider obesogenic environment since little is known about how the influence of this

obesogenic environment is mediated in the home. 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, there is the issue of how these factors have changed, or not, over time. Although 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), this article argues that research needs to focus on the broader influence of the home environment. The 'where, when and how' of eating, rather than simply the 'what' in terms of food, are important concepts that need to be examined, together with intergenerational influences on obese and non-obese subjects. Looking at what goes on in the home, in terms of health-related habits and the decisions that are made regarding specific health-related behaviours, such as eating, is exactly what this research set out to do. The research explored micro influences on children's eating, which involved examining the course of people's day-to-day living and the place that food and eating occupied in their lives within the home environment. In addition, it looked at eating on a macro or societal scale, for example issues relating to marketing and fast-food and considered the extent to which a societal framework supports healthy eating within an environment that is arguably obesogenic.

## Methodology

The research set out to examine the effect of the family on children's eating behaviours within an intergenerational context. This was achieved using a qualitative methodology that employed a grounded theory approach. Rather than starting off with a hypothesis to test, grounded theory is a strategy whose purpose is to generate theory from data, which can then be tested.

The overall aim of the grounded theory approach was:

1. To generate a grounded theory based on the family setting, which explained eating behaviours amongst different generational groups, both within families and between families.

In addition, there were two main objectives:

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

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

The research process was divided into two phases, both guided by theoretical sampling. Theoretical sampling dictates the whole research process meaning there is a cycle of alternation between data collection and data analysis. Initially, the process is iterative where purposive sampling is carried out using predetermined criteria based on the research question. Then, as data is analysed further, decisions regarding sampling are guided by emerging directions in the analysis and the researcher collects new data deliberately to test emerging concepts.

Phase 1 involved focus group discussions with separate generational groups. The aim was to explore general family food and eating practices in different generations within the context of the wider macro environment. The initial sample for the focus group discussions was constructed using a purposeful sampling strategy. Focus group participants were recruited from three sectors of the population, comprising three generational groups, grandparents, parents and children. Participants were not from the same family. As the research progressed and initial data was analysed, further participants within each generational group were chosen in order to provide

additional illumination of the research topic and the developing theory. One hundred and eighteen participants took part in the focus group discussions. Recruitment was mainly achieved using the assistance of gatekeepers from various community organisations who expressed an interest in participating in the research.

The aim of phase 2 was to develop further the work achieved in phase 1. This formed part of the natural progression of the grounded theory process with theoretical sampling taking place in order to develop and test the emerging theory from phase 1. In phase 2 the scale of the research changed and became more focused on micro level processes within the family setting. 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. One-to-one, in-depth interviews were conducted with 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. This phase of the research was concerned with the 'how' and the 'why', as well and what had changed between generations and the influences on children's eating behaviours. Nine families participated in phase 2 and a total of twenty-seven interviews were conducted.

As in phase 1 purposive sampling methods were employed based on the following criteria, the existence of an obese child or a normal weight child in the family and at least three generations within the one family. 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. 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

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. Within the context of the wider macro environment order was found to be influential in terms of decisions made concerning food and eating and the development of eating behaviours.

Following on from this 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 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 typified 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.

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 demonstrated 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. This research found there were differences within families (intra-family variation) and also between families (inter-family variation).

Intra-family variation

There was a greater level of ordered eating as well as fewer differences in ordering of eating evident in the grandparent generation throughout their life course, in both sets of families, compared with the current generation of parents and children. Within the grandparents' 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 or doing the laundry were ordered activities. Eating was part of an established pattern almost as if there was an inherent formula dictating how everyone ate. Food and eating was not something that people necessarily questioned.

- "All the different modes and possibilities compared, there just used to be one way of eating, didn't there really" (Grandparent).

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. 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. Accordingly, mealtimes tended to be at the same time every day with the same meals served on the same days of the week. Work, school and social activities were constructed around these family mealtimes and there was a sense of importance attached to them.

Nowadays, when ordering of eating is considered in terms of what it represents for children and their eating behaviours, it seems to bear little resemblance to the ordered way of eating evidenced in the grandparents' generation. Differences in eating behaviours exist because ordered eating, as in a structured form of eating, has been eroded. The current 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.

- "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" (Child).

Inter-family variation

There were recognisable differences between the families with an obese child and families with a normal weight child. The fundamental difference was that for the current generation of children the eating habits of the obese children exhibited less order compared with the eating habits of normal weight children.

For the families with normal weight children, food and eating was part of an ordered regime of sorts and, as such, it represented a focus in daily life. In contrast, within the families of obese children, this same apparent order was largely missing and food and eating was organised on a more haphazard basis. This meant 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.

- "We sit down at the table…we sit down all together…and we sit down until we've all finished" (Child)

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 everyday. 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.

- "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), A'll 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" (Child).

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

This research has demonstrated that ordering of eating affects our eating behaviours, specifically the 'how' of eating, where we eat, when we eat and whom we eat with.

Clearly, this has important implications for children's eating behaviours, which are symptomatic of the environment they are growing up in, either ordered or disordered, that is dependent on the dominant situation within the family home.

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 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 demonstrated that 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.

The wider literature and other research have provided evidence of the development of an obesogenic environment and childhood obesity. These have informed understanding concerning a possible relationship between the two and in addition, have led to a dietary focus on what children eat, not on how they eat. Current strategies for tackling childhood obesity are more aligned with a medical approach where the emphasis is on food and controlling diet. This research suggests such tactics are ineffective. A longer-term solution would be to move away from the current preoccupation with diet and the demonisation of certain foods, towards a focus on eating and family eating patterns within the home. The research outlined here has done just that and refocused attention on eating and specifically, ordering of eating.

Rather than challenging other research, the findings of this research need to be viewed as complementary. The ultimate goal is to achieve a healthy balanced diet at a population level. Although this is widely accepted amongst policy-makers and researchers, 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).

## Future considerations

One way forward for tackling children's eating behaviours would be a holistic approach based on an ecological framework. This means focusing on multi-level influences, micro and macro, looking at how they impact on the family and what can be done to affect change. Families are a hugely varied group, particularly given the constantly changing boundaries relating to the structure of the modern family. In addition, the family home is regarded as a private setting. Perhaps this helps to explain why the family home has yet to be fully utilized as a potentially effective setting for tackling eating behaviours and childhood obesity (Novilla et al, 2006).

The theory of ordering of eating represents a different way of looking at the problem of childhood obesity and when incorporated within an ecological framework, it is

easier to see how the theory can be of practical use in addressing eating behaviours within the family. Ordering of eating interventions, when part of a multi-faceted programme, do offer a more realistic approach to tackling eating behaviours, especially when it is considered that current strategies, which commonly target food and diet are largely ineffective. Peploe et al support an ecological approach, maintaining that "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, 365). Even so, it needs to be remembered that interventions that expect families to change how they function are ambitious and they cannot be viewed as a simple input - output phenomenon. The family is a highly complex entity and there is a huge amount happening in relation to micro and macro factors. This means it is important not to take a simplistic view of how easy it is to implement changes within the family. Individual behavioural change is difficult enough, but introducing an intervention that demands a total lifestyle change on the part of family members is demanding and challenging for all concerned.

What is needed is a change of emphasis. Firstly, policy makers need to shift their focus towards a new strategic way of thinking, one that considers obesity a problem of the environment and the population as a whole. Secondly, the environment, at all levels, is a significant, if not the most significant, contributory factor. Thirdly, children's immediate environment, namely the family home, is arguably the most significant factor of all. Finally, within the family, it is eating and specifically the 'how' of eating, rather than food, which should be the focus, as the grounded theory of the research clearly illustrates.

However, 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 environment, 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. Greater attention could be directed at how professionals can support a change in family eating. One way to achieve this would be through increased collaboration in any interventions aimed at family eating. So, for example, between traditional health professionals and those who are outside of the more traditional remit, such as architects and urban planners. It is important to remember that the family lives in a home, which requires an examination of the family in its social unit - the physical dwelling place where the family lives. Environmental measures to improve the physical design of the home and the resources that the family has at its disposal can complement behaviourally oriented interventions (Kalnins, 2000). Although housing is acknowledged as a factor in family health (Kalnins, 2000) there is little consideration given to the design of family living space and its impact on family eating behaviours, for example, whether there is room to accommodate a table for eating.

In order for interventions to be incorporated within a more effective approach addressing childhood obesity the evidence needs to be strengthened, in terms of establishing a link between ordering of eating and diet. The focus of this research was on eating within the family, specifically familial influences that might increase the risk of obesity in susceptible individuals, for example, children eating different foods, in different locations and at different times to their parents. In this respect the research is unique. Future research needs to formally test the relationship between the 'how' and the 'what' of eating in order to determine whether there is a relationship between family practices, disordered eating and foods that are eaten.

When the wider context of children's eating is considered and the variety of research that has been undertaken to address the cause and treatment of childhood obesity is

taken into account, it is both surprising and disheartening to find that so little research has been done investigating the family setting as a contributory factor for childhood obesity. Therefore, an approach such as that outlined in this paper, which advocates tackling the problem from a different angle, namely one that focuses on the family setting, is long overdue. If, as Brownell (2005) maintains, the cause of obesity, as well as the solutions, lie in the environment, then the family setting, as perhaps the most significant environment of them all, needs to be the biggest priority. Long-term lifestyle changes have been formally recognised in recent policy guidelines as supporting best-practice standards for reducing the incidence of childhood obesity (NICE, 2006, 7). Given that ordering of eating is part of a strategy focusing on long-term lifestyle changes, a suitable place to begin prioritising the family setting would be to make the 'how' of eating more explicit within key recommendations. Accordingly, ordering of eating and the family setting would be formally recognised in any interventions directed at the prevention and treatment of childhood obesity, as well as making it a requirement for future research.

**Figure 1 Spectrum of ordering of eating**

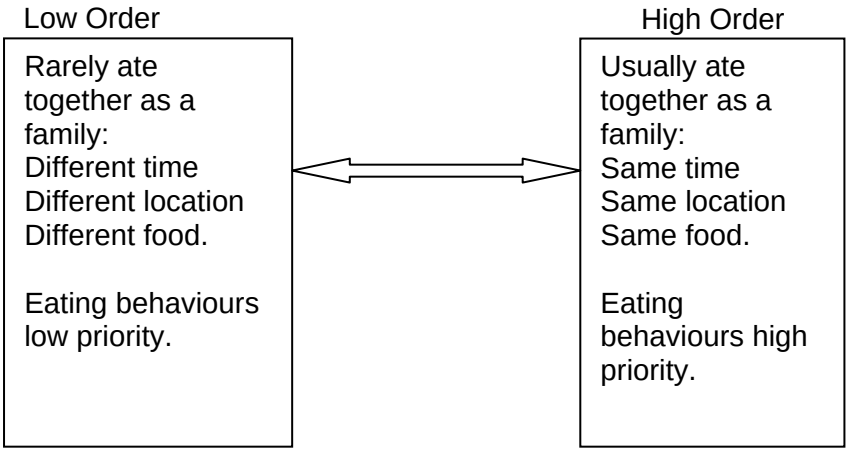
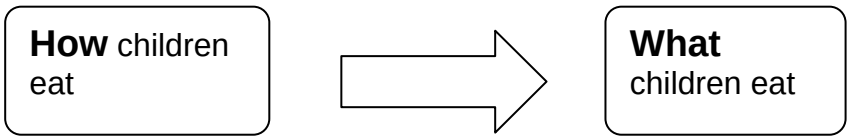



**Figure 2 Eating Process**



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