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The effect of diet on children's mental performance: a study of the attitudes, knowledge and perceptions of UK parents

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Nutrition is one of many factors that affect development of the brain and hence the mental performance of children; the latter term being used to describe a great variety of different brain-mediated functions and processes. The brain develops throughout childhood and an adequate diet is required for its optimal functioning and development[(1)]. Consequently undernutrition has been associated with problems of cognition and behaviour, both on a short-term and long-term basis[(2)]. To remain metabolically active the brain requires a constant supply of glucose as well as a range of other nutrients and both the nature of children's diets and pattern of meal consumption may influence mental performance.

Parents are responsible for the provision of food within the home and as such play a key role in the development of children's food choices and eating behaviours[(3,4)]. There is little published research on parent's perceptions of the relationship between a child's diet and their mental performance. The aim of the present qualitative study was to explore the attitudes, knowledge and perceptions of parents of the effect of diet on children's development. Parents were recruited through a number of primary schools in the Guildford area. A semi-structured interview schedule was used; topics included the effect of food on children's wellbeing and development, the physical and mental effects of food and the short- and long-term effects of children's diets. Further questions were asked about possible effects of specific foods, meals and supplements as well as the impact of what children eat in school on their performance.

Analysis of the interviews identified a number of themes including the overarching relationship between diet and health. Parents spoke of the effects of diet in terms of physical, mental and behavioural outcomes, clearly distinguishing between what they perceived as positive and negative foods: 'I've seen children's behaviour different when they've eaten certain foods, like they get hyper when they have sweet stuff and drink sugary stuff and eat sweets and cakes'.

Concentration was the aspect of mental performance most discussed by parents, being affected both by particular foods and by feelings of hunger: 'I would imagine that if they're hungry they will be tired, they're not going to concentrate, they're not going to do as well as they could do'. Parents attested to the importance of establishing good eating habits in childhood, as these habits would continue into adult life with implications for future health. The present study provides evidence of parents' views on the effects of food on children's performance. Further research is needed to examine the views of others with insights in relation to children's development (e.g. teachers).

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