

## Analysis of Parents' Cognition of Obesity and Family Feeding of Children Aged 3-6

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**Abstract:** This study explored parents' awareness of obesity in children aged 3-6 and the status of family feeding, and provided suggestions for preventing obesity in children. Choosing parents of 3-6 years old children in Chongqing as the research object, the questionnaire was adapted to investigate the contents of the survey, including basic family information, parents' knowledge and attitudes towards childhood obesity, and the status of family feeding awareness, behavior, atmosphere and knowledge acquisition. Parents' understanding of obesity-related knowledge is weak. 67.68% of parents do not know whether children are obese, 87.3% of families have experienced controlled feeding behavior, 88.04% of families have experienced instrumental feeding behavior, there is a "deviation between knowledge and practice" in feeding concept and practice, and the single way to acquire relevant knowledge is mostly from the network and parents. Then it gives three-in-one suggestions: kindergartens and communities actively publicize relevant knowledge, parents master relevant scientific nutrition knowledge, correct feeding behavior and create a positive feeding atmosphere to promote children's health.

### 1. Introduction

According to the latest data released by the China Children's Obesity Report in 2017, the obesity rate of children in major cities is rising [1]. At present, the obesity rate of children aged 0-7 is about 4.3%. If not controlled, by 2030, the detection rate of obesity among children aged 0-7 will reach 6.0%, and the number of obese children will increase to 6.64 million; the detection rate of overweight and obesity among school-age children aged 7 years and over will reach 28.0%, and the overweight rate will reach 28.0%. The number of obese children will increase to 49.48 million. It can be seen that the situation of overweight and obesity of children in China is severe, and there are many factors leading to obesity [2-4]. Because preschool children are in the stage of growth and development, according to their physical and mental development characteristics, they are greatly affected by their parents. In the Outline for the Development of Children in China (2011-2020), it is pointed out that scientific feeding should be carried out, the feeding level of parents of infants and young children should be improved, and the diet should be reasonable [5]. So family feeding and parents' awareness of infant obesity are very important. The purpose of this study is to understand the current status of obesity awareness and family feeding among parents of 3-6 years old children in Chongqing, and to find out the problems and put forward reasonable suggestions.

## **2. Research Method**

### **2.1 Object of Investigation.**

In this study, parents of 3-6 year-old children in Chongqing, China were selected as the subjects. A total of 526 online questionnaires were collected and 393 valid questionnaires were collected. The overall effective rate was 74.7%.

### **2.2 Investigation Method.**

This study mainly adopts the questionnaire survey method and adopts the five-point Likert scoring method. The response scale adopts "always 5 points, often 4 points, occasionally 3 points, rarely 2 points, never 1 point". Questionnaire cloned Bach Alpha value was 5.94. The reliability value was compared with the cloned Bach Alpha coefficient. The cloned Bach Alpha in the control table was  $0.5 = <$  cloned Bach Alpha coefficient  $< 0.7$ , and the reliability was more reliable (the most common). In conclusion, the reliability of the data is more credible and can be used for further analysis.

### **2.3 Statistical Method.**

According to the questionnaire, the data were counted by SPSS Statistics 23.0 and Excel2010 software.

## **3. Result Analysis**

### **3.1 Analysis of Parents' Cognition of Childhood Obesity.**

From Table 1, we can see that only 32.32% of parents can choose their children's body shape, but 67.82% of parents do not know whether their children belong to obesity. This indicates that most parents do not know whether their children belong to obesity, which may be due to the lack of knowledge in this area, and they could not make a clear and correct judgment on their children's body shape. In the discrimination of high-calorie food, vegetables, fruits or (and) rice accounted for 5.59%, ice-cream sausage and fried chicken leg accounted for 42.74%, only ice-cream sausage and fried chicken leg accounted for 30.78% of the total, and a high-calorie food accounted for 20.86% of the total. In summary, parents could choose high-calorie food, but most parents (063.6%) did not choose full-calorie food. Measuring food indicates that parents' knowledge of how to distinguish those foods from high-calorie foods is not perfect and needs to be strengthened. Among the factors causing infant obesity, unclear accounts for 6.10% of the total number, one for 18.06%, two for 33.33%, three for 30.27% and four for 12.21% were chose. This shows that parents can choose the factors causing childhood obesity, but most parents (87.79%) could not choose all of them, and another 6.10% of parents do not know what factors lead to obesity, so the knowledge about which factors lead to obesity needs to be strengthened.

Regarding the attitude towards infant obesity, 11.96% of parents think it's okay not to worry if their children are overweight or obese. 32.82% of parents feel a little worried, but they don't want to restrict their diet. 34.86% of parents are worried, but they don't know how to control their diet reasonably. 20.36% of parents have the heart and want to control their diet. This shows that most of them want to control their diet. Some parents worry about their children's obesity, and some parents worry about it, but they don't know how to control their diet reasonably. Most parents (58.52%) think that obesity in children needs to be prevented as soon as possible. They need to start prevention now. Some parents (31.04%) think that children are too young to prevent obesity too early. Few parents (10.43%) think it is not necessary. This shows that most parents have the awareness of obesity prevention, but some parents think it is not necessary to do prevention.

In participating in nutritional health publicity or lectures, it was indicated that most parents had occasionally or never participated in nutritional health publicity or lectures, only (10.69%) parents often participated. This shows that the publicity of health and nutrition by the society and relevant departments is not enough. In the process of teachers' emphasizing the cultivation of children's

dietary habits to parents, it shows that most preschool teachers occasionally or seldom emphasize the cultivation of children's dietary habits, and only (8.65%) teachers often emphasize it.

Table 1 Parents' cognition and attitudes towards childhood obesity

Questionnaire contents	Option	Frequency	Percentage (%)
Do you think children are obese?	No	68	17.3
	Yes	59	15.02
	Unclear	266	67.68
It is believed that childhood obesity needs to be prevented as soon as possible	Yes, but it's still early	122	31.04
	Unwanted	41	10.43
	Need to start prevention now	230	58.52
Differentiation of High-calorie Foods	Choose vegetables, fruits or (and) rice	22	5.59
	Choose only ice-cream sausages and fried chicken	121	30.78
	Choose two or more of the fried chicken sausages with ice cream	168	42.74
	Choose the right high-calorie food	82	20.86
	Choose all the right ones	48	12.21
Factors causing obesity	Choose three	119	30.27
	Choose two	131	33.33
	Choose one	71	18.06
	Unclear	24	6.01
Participate in nutritional health promotion or lectures	Often	42	10.69
	Occasionally	232	59.03
	Never	119	30.28
Teachers will emphasize the cultivation of children's eating habits	Always	34	8.65
	Often	163	41.48
	Occasionally	134	34.1
	Very Seldom	40	10.18
	Never	22	5.6
If your child is overweight or obese, do you worry and adjust your diet?	No worries	47	11.96
	A little worried, but don't want to limit my diet	129	32.82
	Worry, but don't know how to control your diet properly	137	34.8
	Worried about starting to control your diet	80	23.6

### 3.2 Analysis of the Present Situation of Family Feeding.

Parents' awareness of children's obesity will affect the way of family feeding. Because preschool children are at the stage of growth and development, their psychological development is immature, their self-control ability is poor, and they are greatly influenced by their parents. Parents are the initial food controllers and providers of children, so family feeding will also affect children's obesity.

Parents' awareness of childhood obesity and good family feeding concept are the key to creating positive feeding behavior for children. In the family, it is very important for parents to have correct knowledge of feeding. In this survey, we found that when parents see that their children at the same age are fatter than their own children, whether they blame themselves for not feeding them properly or not, most parents will more or less blame their own feeding. Only 27.48% of parents never think so,

and then when parents see that their children at the same age are fatter than their own children, they blame themselves for not feeding them well. Questions were cross-analyzed (Table 2). According to Table 2, when parents of boys see that their children of the same age are fatter than their own children, the average score of parents who blame themselves for not feeding their children is higher than that of girls. Most parents worry more or less about their children eating too much or being overweight. Only 21.12% of parents never worry about their children eating too much or being overweight. The cross-analysis of children's gender and worrying about their children eating too much or being overweight was conducted (Table 3). According to Table 3, it can be seen that boys' parents are more worried about their children's overeating or overweight than girls' parents, and their average score is higher than girls' parents, which indicates that boys' parents are more likely to worry about their children's overeating or overweight.

Table 2 Cross-analysis of parents' attribution of unfed children and children's gender

X/Y	Always	Often	Occasionally	Very seldom	Never	Subtotal	Average
Boy	17	34	74	37	53	215	2.65
Girl	6	31	47	39	55	178	2.40

Table 3 Cross-sectional analysis of children's gender and fear of overeating or overweight

X/Y	Always	Often	Occasionally	Very seldom	Never	Subtotal	Average
Boy	18	49	69	38	41	215	2.84
Girl	14	27	55	40	41	178	2.61

Parents play an important role in the development of children's healthy diet behavior. Family feeding behavior also has a certain impact on children's obesity. Family feeding behavior is divided into controlled and instrumental feeding. Controlled feeding behaviors, such as restrictive and compulsory feeding, have a significant impact on obesity in children. Using food as a reward for good performance will make children prefer certain foods. Instrumental feeding behavior will cause children to eat emotionally and affect children's emotional regulation. Parents play an important role in the development of children's healthy diet behavior. Family feeding behavior also has a certain impact on children's obesity. Family feeding behavior is divided into controlled and instrumental feeding. Controlled feeding behaviors, such as restrictive and compulsory feeding, have a significant impact on obesity in children. Using food as a reward for good performance will make children prefer certain foods. Instrumental feeding behavior will cause children to eat emotionally and affect children's emotional regulation. In this survey, 17.3% of parents did not use food to reward their children. 54.70% of parents chose one food. Among them, 95 chose fruit, 120 chose high calorie food, 32.06% chose two, 0.99% chose three, and 0.61% chose four or more items (Table 4). The president will use food as a reward, only 17.3% of parents will not do so. When a child behaves badly, parents will refuse to give him the food he likes. Among them, 5.34% of parents always punish him with the food he likes when he behaves badly, 22.9% of parents often do so, 41.22% of parents occasionally do so, 18.58% of parents seldom do so, and 11.96% of parents never do so. This shows that most parents will often or occasionally do so. If children are punished by food, cross-analysis is made between their data and their classes (Table 5).

Table 4 Frequency table of what foods to use as rewards

Questionnaire contents	Option	Frequency	Percentage (%)
Use food as a reward	Don't use food as a reward	68	17.03
	Choose one	215	54.70
	Choose two	126	32.06
	Choose three	39	0.99
	Choose four or more	24	0.61

Table 5 Cross-sectional analysis of children's gender and fear of overeating or overweight

Class	Always	Often	Occasionally	Very seldom	Never	Subtotal	Average
Junior	3	12	23	11	5	54	2.94
Secondar y	4	41	70	20	12	127	3.03
Senior	11	25	42	42	17	120	2.90
Preschool	3	12	27	27	13	72	2.65

Most young parents acquired feeding knowledge through books, which accounted for 41.4%, 24.8% and 4% respectively from their elders and schools. In terms of needs, most parents expressed the need for training and counseling on feeding knowledge [6]. According to the data of this survey (Table 6), most parents selected 1-3 information sources. Among the selected ones, the frequency of network sources was up to 35, followed by 29 from teachers' propaganda. Among the selected two items, the number of people who got information from the elders and the network was up to 20. Among the selected three items, the number of people who got information from newspapers, books, elders and the network was up to 11. This shows that in this survey, most parents get feeding knowledge from the Internet and their elders.

Table 4 Frequency table of what foods to use as rewards

Questionnaire contents	Option	Frequency	Percentage (%)
Sources of knowledge and information on family feeding	Don't use food as a reward	90	22.90
	Choose one	112	28.49
	Choose two	113	28.75
	Choose three	48	12.21
	Choose four or more	30	7.63

#### 4. Summary

According to the survey, 80.15% of families breast-feeding time is less than 12 months, which indicates that in this period of time before kindergartens enter kindergartens, parents need to strengthen the propaganda of parents' related knowledge; parents lack knowledge about obesity, and knowledge is not perfect enough; parents do not have high awareness of the dangers of childhood obesity; and parents have less access to relevant knowledge, and kindergarten teachers have less access to it. Relevant knowledge propaganda is less. In the instrumental feeding behavior, it was found that most parents would choose high calorie food as a reward, or refuse to give children favorite food as a punishment. This feeding method will make children have a preferential eating habit, which is not conducive to the healthy development of children. In most families, children watch TV, play with toys, and are in a daze while eating. The acquisition of feeding knowledge is mainly from the elders on the Internet.

Develop relevant knowledge training or propaganda, parental education and other related activities in the community, improve parents' correct and scientific knowledge of child-rearing, and establish a higher awareness of the dangers of obesity; in kindergartens, through home-based co-education, teachers actively disseminate relevant knowledge to parents, through the development of relevant knowledge gathering activities, parents' and children's activities, lectures and other forms, to convey good knowledge to families. Understanding of concepts and related knowledge needs to be nurtured. Let parents have a correct understanding of obesity, but also from the perspective of children themselves, so that children can distinguish simple high-calorie food, so as to combine family and kindergarten, random education and systematic education; family, to actively learn relevant knowledge, multi-channel access to knowledge, and the correctness of knowledge to identify.

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