SPSS Statistical Software Analyses the Influence of Adoptive Persons of Preschool Children on Their Breakfast Behavior

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ABSTRACT¹. Breakfast plays an important role in the health of preschool children, which cannot be replaced by lunch and dinner. Breakfast quality will affect the nutritional intake and growth level of preschool children, and even more seriously, it will affect their cognition and learning. In order to improve the attention of the main adopters of preschool children to their breakfast behavior, this study mainly investigated the attitude, nutrition knowledge and breakfast behavior of the main adopters of preschool children about breakfast behavior of preschool children, and then used SPSS statistical software to analyze the collected data. The results showed that the breakfast behavior of preschool children was mainly influenced by their main adoptive persons. The main adoptive persons of preschool children neglect the education of breakfast behavior health of preschool children and the lack of knowledge of breakfast nutrition and health of the main adoptive persons themselves, which leads to the lack of high-quality breakfast nutrition for preschool children. Therefore, it is suggested that the main adopters of preschool children should have scientific knowledge of nutritional breakfast, actively cultivate the knowledge of nutritional breakfast and eating habits of preschool children, and develop good breakfast habits themselves to maintain the health of preschool children.
1. INTRODUCTION
Breakfast should provide 30% of the total energy of the whole day, and the amount of food eaten for breakfast should be equal to one third of the total amount of food eaten throughout the day [1]. Preschool childhood is a period of extremely rapid development of children's physical development and function. In order to effectively promote the physical and mental health of preschool children, adults should provide preschool children with reasonable and balanced nutrition [2]. Breakfast is very important for preschool children. Firstly, the nutritional intake of breakfast is inadequate. Preschool children will have problems such as inattention and memory decline gradually [3]. Secondly, the good habits of preschool children are relatively stable until adulthood. Good breakfast behavior can not only provide preschool children with the nutrients they need, but also affect the lifelong eating habits of preschool children [4].

Current studies have pointed out the current situation of children's breakfast behavior and some prominent problems. Some scholars have pointed out that bad breakfast is harmful to children [4], and some studies have also proposed that children should have balanced breakfast [5]. Firstly, to a certain extent, it has aroused public concern about children's breakfast behavior and the quality of children's breakfast, but most of the subjects are school-age children aged 6-18 years, and there are few studies on pre-school children's breakfast behavior. Secondly, through literature review, it is found that there are few studies on the influence of the main adopters of preschool children on their breakfast behavior. The main adopters of preschool children are the providers of breakfast for preschool children. The behavior habits and concepts of the main adopters in daily life will have a profound impact on preschool children. Therefore, it is necessary for preschool children to face and improve these problems together with their main adoptive persons.

2. RESEARCH METHOD

2.1 Concept Definition
Preschool children: preschool children refer to children who have not reached the age of primary school. The school age of children in China is six and a half years old, so children aged 0 to 6.5 years can be regarded as preschool children. This study is aimed at preschool children in kindergartens, so the subjects are preschool children aged 3 to 6 years.

Breakfast Behavior: breakfast is the first meal of the day, which is enjoyed in the morning. It has a very important impact on the nutrition and health of the body [6]. Behavior refers to the activities of an organism under the influence of some internal and external stimuli, which are dominated by ideas. Breakfast behavior refers to the food and health concepts governing eating related to breakfast. Breakfast behavior in this study mainly focused on the concept of breakfast nutrition, the frequency of breakfast eating and the intake of nutrients for breakfast.

Mainly adoptive person: nurturing refers to nurturing, providing the necessities of life, and substituting for nurturing refers to the replacement of nurturing. This study mainly refers to the main adoptive person of preschool children: parents, grandparents, grandparents, a small number of nannies.

2.2 Data Analysis
The data of this study are from paper questionnaire and network questionnaire. The respondents are mainly from Chongqing city and other provinces in China. Chongqing city includes Shapingba District, Nanan District, Jiangbei District, Yubei District, Fuling District, Wanzhou District, Kaizhou District and Xiushan County. Other areas include Chengdu City, Xiamen City, Shenzhen City and Zhejiang Province. 2000 questionnaires were collected, of which 1895 were valid. This study analyzed five aspects: the types of main adopters of preschool children, the breakfast situation of preschool children, the cultivation of healthy diet of the main adopters, and the intake of important nutrients of preschool children. In this study, SPSS software was used to analyze the data from the above four aspects. Combining with the relevant literature theory, the paper analyses and evaluates comprehensively, and puts forward specific measures and methods for influencing factors.
3. RESULTS

3.1 Effects of Different Types of Main Adoptive Person
Table 1 shows that 50.8% of preschool children are raised by their parents alone. 23.4% were raised by the elders, 20.7% were raised by the elders with their parents, and a small number of people were raised by nannies and other relatives.

In the era of rapid development, busy work and pressure make it impossible for young parents to raise their children alone. A large proportion of preschool children are raised by their parents or elders or jointly. There are a series of problems in intergenerational upbringing, such as excessive indulgence, excessive protection. The older generation is slow to accept new things [6,7]. For preschool children's breakfast, they can not have a scientific and reasonable concept to prepare for preschool children, nor can they convey the correct knowledge of healthy breakfast nutrition for preschool children. Such a situation is not conducive to the improvement of the quality of breakfast for preschool children, but may also affect the health of preschool children.

| Adoptive person               | Percentage (%) | Accumulated percentage (%) |
|-------------------------------|----------------|----------------------------|
| Parents                      | 50.8           | 50.8                       |
| Grandparents                 | 15.2           | 66.0                       |
| Parents and grandparents    | 13.4           | 79.4                       |
| Maternal grandparents        | 8.2            | 87.6                       |
| Parents and maternal grandparents | 7.3 | 94.9                       |
| Nanny                        | 4.0            | 98.9                       |
| Other                        | 1.1            | 100.0                      |
| Total                        | 100.0          | 100.0                      |

Table 1. Pre-school children's adoptive person types

3.2 Effect of Insufficient Awareness of the Importance of Breakfast among Main Adoptive Person
Table 2 shows that 86.4% of preschool children eat breakfast every day, but 13.6% of preschool children do not eat breakfast every day, including 8.4% of preschool children eat breakfast less than three times or even once a week.

| Breakfast frequency | Percentage (%) | Accumulated percentage (%) |
|---------------------|----------------|---------------------------|
| Every day / almost every day | 86.4 | 86.4 |
| 4-5 times / week    | 5.2            | 91.6                       |
| 2-3 times / week    | 2.1            | 93.7                       |
| <=1 times / week    | 6.3            | 100.0                      |
| Total               | 100.0          | 100.0                      |

Table 2. Frequency of breakfast for preschool children

Studies show that preschool children who skip breakfast in the morning have lower intake of nutrients such as protein, fat, carbohydrate, minerals such as iron, calcium, vitamin B12, vitamin B2 and folic acid than those who eat breakfast in the morning. Breakfast can improve the intake of iron, magnesium, calcium, vitamins and other nutrients. The main effects of breakfast on preschool children are comprehension, short-term memory and attention [8]. The study found that preschool children who
ate breakfast had higher figure discrimination ability than those who did not eat breakfast, and preschool children who ate breakfast had higher response ability than those who did not eat breakfast. Adequate breakfast nutrition intake is better than inadequate nutrition intake in preschool children's physical endurance and creative thinking. Preschool children are at a critical stage of growth and development, requiring comprehensive nutrients [8]. Therefore, it is necessary to absorb enough nutrients from food to meet the needs of growth and development. Breakfast can supplement the energy consumed by preschool children all night and provide enough heat for preschool children. Breakfast is the most important meal of the day. Breakfast should get 30% of the energy of the day. Preschool children are more physically and mentally active every morning. They can not get the energy they need without breakfast, which may lead to fatigue, fatigue and mental retardation. If we do not eat breakfast for a long time, it will damage the skeleton growth and digestive system of preschool children, and have a greater impact on preschool children's cognitive and brain development. Therefore, whether or not to eat breakfast has different effects on the physical and mental development of preschool children.

3.3 Effect of Main Adoptive Person on the Insufficient Health Diet Education of Preschool Children

From Table 3, we can see that the attention of adoptive persons on dietary health has increased, which indicates that adoptive persons have realized the importance of healthy diet for preschool children. However, according to the survey, there are still a large number of adoptive persons who lack or less education on healthy diet for preschool children. Parents are the first teachers of their children. All their children's eating and living behaviors are closely related to their family, long-term environment and surrogates. The lack of dietary education for preschool children is caused by many factors. Firstly, the lack of healthy dietary knowledge of the surrogates leads to the inability to educate preschool children. Secondly, the family environment is complex. In families where grandparents raise children together, parents and elders have deviations in their concepts in raising children, which leads to the imbalance of healthy diet education for preschool children. Breakfast behavior belongs to a part of healthy eating behavior. The surrogate caregivers should not only attach importance to its role, but also serve as an example to teach preschool children healthy breakfast diet concept, so that preschool children can maintain good breakfast behavior and benefit them for a lifetime.

Table 3. Frequency of education on healthy diet for preschool children by adoptive person

| Education frequency | Percentage (%) | Accumulated percentage (%) |
|---------------------|----------------|---------------------------|
| Always              | 8.0            | 8.0                       |
| Often               | 42.1           | 50.1                      |
| Occasionally        | 36.1           | 86.2                      |
| Very seldom         | 12.1           | 98.3                      |
| Never               | 1.7            | 100.0                     |
| Total               | 100.0          | 100.0                     |

3.4 Effect of Lack of Knowledge about Nutritional Breakfast among Main Adoptive Person

As can be seen from Table 4, the nutrient intake of preschool children at breakfast is uneven. Dairy products, fruits and meat are eaten more than 50% daily, higher than eggs and nuts. The proportion of eggs and nuts consumed per day was lower, and the frequency of nuts consumed per day was 12.2%, especially less. Eggs and dairy products contain high-quality protein, but also rich in calcium, iron, vitamins and other nutrients. Nuts contain proteins and fats, of which carbohydrates are more than 70% [9]. Nuts also contain a small amount of vitamins and trace elements. Fruits are rich in vitamins and dietary fiber. Animal meat not only provides high-quality protein, but also provides nutrients such as fat and minerals [9]. A balanced breakfast can satisfy 30% of the energy of preschool children a day.
Inadequate nutritional intake of breakfast can lead to preschool children's inattention and morning listlessness. A nutritious breakfast should contain four or more foods. It should have three nutrients, protein, fat and carbohydrate, which provide the main energy sources. It should also contain vitamins and minerals to supplement other energy sources [10]. Each breakfast for preschool children should contain these important nutrients in order to ensure the basic physical needs of preschool children. Adoptive persons should not only provide one or two nutrient-rich foods a day, but also ignore the value of other nutrients. To have correct and scientific nutrition and health knowledge is the basis of having a healthy breakfast. Because if there is no correct understanding, then, in daily life, surrogate caregivers can not scientifically and reasonably provide balanced nutrition breakfast for preschool children, nor can they choose food according to the development of preschool children of different ages to supplement nutrition for preschool children. This will delay the growth of preschool children.

Table 4. Breakfast intake of important nutrients in preschool children (%)

| Frequency               | Eggs | Dairy products | Nuts | Fruits | Meat |
|-------------------------|------|----------------|------|--------|------|
| Every day / almost every day | 34.9 | 56.3           | 12.2 | 53.5   | 57.6 |
| 4-5 times / week        | 20.6 | 18.8           | 15.6 | 22.6   | 22.3 |
| 2-3 times / week        | 29.7 | 14.2           | 38.7 | 15.7   | 12.9 |
| <=1 times / week        | 14.8 | 10.7           | 33.5 | 8.2    | 3.9  |
| Total                   | 100.0| 100.0          | 100.0| 100.0  | 100.0|

4. Discussion

4.1 Adoptive Persons Should Have Scientific Knowledge of Nutritional Breakfast

Preschool children are in a period of vigorous growth and development. Scientific and reasonable breakfast mix can help them grow healthily. The Dietary Guidelines for Chinese Residents, formulated by the China Nutrition Association, can be used as a reference for foster care providers and provide scientific and reasonable breakfast for preschool children. According to the Dietary Guidelines for Chinese Residents, breakfast preparation should be diversified, with cereals as the main food; more vegetables, fruits and potatoes; more dairy, legumes and their products; more fish, poultry, eggs, lean meat and so on; remember to eat less fat and buckwheat oil [1]. According to the "Dietary Guidelines for Chinese Residents" on how to choose food, the first category is categorized according to the nutrients covered. The first category is carbohydrates, such as steamed bread, cakes, rice noodles and other cereals and potatoes. The second category is high quality protein, such as milk, eggs, meat and beans products. The third category is inorganic salts, vitamins, such as cucumbers, tomatoes and other vegetables and fruits. If you want to have a nutritious breakfast, you should include the above three kinds of food. It is also possible to have the first and second nutrients in the breakfast, but if only one of the first and second nutrients is included in the breakfast, the quality of the breakfast is poor. Adoptive persons should ensure that preschool children can eat the three kinds of food as much as possible every day [1].

4.2 Adoptive Persons Should Have Good Breakfast Behavior to Set an Example for Preschool Children

Preschool children's minds are not mature enough to distinguish some wrong concepts and behaviors, and preschool children have strong "imitation" and "dependence". Their main adoptive persons are responsible for the living and eating arrangements of preschool children. They will rely on the care given by the main adoptive persons and imitate the behavioral habits of the main adoptive persons in
daily life. The bad breakfast behavior of the main adoptive persons is bound to have an impact on preschool children. Therefore, in order to enable preschool children to develop good breakfast behavior habits and nutrition intake of breakfast, the main adoptive persons of preschool children should not only have a scientific concept of nutritional breakfast, but also strictly require their own breakfast behavior to set a good example for preschool children.

4.3 Adoptive Persons Should Have Good Breakfast Behavior to Set an Example for Preschool Children

Preschool age is a period of mental and physical development. Most of the important habits, personalities and attitudes needed in life can be cultivated before the age of six [11]. During this period, their psychology and physiology are in a shaping stage. Before they have formed a fixed pattern of eating behaviors, such as breakfast behavior, they are vulnerable to the influence of people, things and things around them [12]. Preschool children are like a blank sheet of paper, on which the principal adoptive persons of preschool children are doodled. The main adoptive persons find and intervene in the bad breakfast behavior of preschool children in the critical period of preschool age in time, which can create an environment conducive to the healthy growth of preschool children [13]. Through health education, let preschool children gradually understand the nutritional value of various foods and the importance of health, can improve preschool children's unhealthy breakfast behavior [14]. Adoptive persons should not only master the basic knowledge of nutritional breakfast, but also set an example for preschool children through their good breakfast behavior. When the adoptive person prepares breakfast for them every day, he can use this opportunity to educate the children and tell them the healthy breakfast diet viewpoint, which will benefit the preschool children for a lifetime [15]. The foster care providers want to let preschoolers know the nutrients of various foods and educate preschoolers about the dangers of selective eating. By visiting vegetable gardens, orchards and fields, we can observe how various foods grow in the natural environment, stimulate their curiosity and exploration psychology, and feel that food is hard to come by [16]. In daily life, adoptive persons can let children participate in food production, and experience the value and characteristics of food through personal experience. These ways can make preschool children interested and enhance their awareness, thus changing bad habits and making preschool children develop the good habit of eating every breakfast.

5. CONCLUSION

Breakfast plays an important role in the physical and mental health development of preschool children. Good breakfast behavior can not only provide nutrients for the body, but also help preschool children develop cognitive, brain and physical functions. At the same time, good breakfast behavior will accompany preschool children for a lifetime. Survey data analysis shows that the main adoptive persons of preschool children have a greater impact on their breakfast behavior, and the influencing factors are mostly from the main adoptive persons of preschool age, the main adoptive persons lack scientific knowledge of nutritional breakfast, the main adoptive persons lack the concept of actively cultivating the good breakfast behavior of preschool children; the main adoptive persons lack the concept of actively cultivating the good breakfast behavior of preschool children; People themselves do not develop good breakfast behavior.

Through investigation and analysis, it is suggested that the main adoptive persons of preschool children should have a scientific concept of breakfast nutrition or learn the essential nutrients for breakfast, so as to prepare a nutritious breakfast for preschool children. Secondly, the main adoptive persons themselves should develop good breakfast behavior and set a good example for preschool children. Thirdly, the main adoptive persons should take the initiative to cultivate preschool children's breakfast eating behavior and nutritional health awareness, so that preschool children can truly understand the knowledge of nutritional breakfast, so as to help them develop good breakfast behavior.
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