

Observation of the Effect of Yingyangbao Intervention on Infants and Young Children Aged 6 to 23 Months in Poor Rural Areas of China

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Abstract : In order to improve the malnutrition of infants and young children in poor rural areas of China, Chinese government implement a project on improvement of children's nutrition in poor rural areas. Each infant or young child aged 6 to 23 months in selected poor rural areas of China was provided a package of Yingyangbao (YYB) per day, which is a full fat soy powder mixed with multiple micronutrient powders. A technical direction to implement this project comprehensively in poor rural areas of China will be provided by assessing the nutritional status of infants and feeding practices of caregiver. The nutritional intervention was conducted using Yingyangbao for infants aged 6 to 23 months in six poor counties of Shanxi, Yunnan and Hubei Provinces. The caregiver or parents of infants were educated on feeding knowledge and practice. A total of 1840 infants were assessed before the intervention and 1789 infants one year later. The length, weight, hemoglobin concentration of infants were measured to evaluate nutritional status before and after the intervention respectively. The questionnaires were designed to collect data for the basic demographic information and feeding practices. The average weight of infants aged 6 to 23 months increased from $9.59 \pm 1.54\text{kg}$ to $9.73 \pm 1.61\text{kg}$ one years later ($p < 0.01$), and the average length from 76.0 ± 6.0 to 77.0 ± 6.1 ($p < 0.01$). The weight and length of infants aged 12 to 17 months had most obviously improving effect among the three age groups. Before the intervention, the hemoglobin concentration value of infants was $11.7 \pm 1.2\text{g/L}$, and the anemia prevalence was 32.9%. One year later, the hemoglobin concentration value of the infants was increased to $12.0 \pm 1.1\text{g/dL}$, and the anemia prevalence was decreased to 26.0%. There were both statistically significant ($p < 0.01$). The anemia prevalence of infants aged 18 to 23 months had most obviously improving effect which decreased from 25.0% to 17.2% ($p < 0.01$). The proportion of infants aged 6 to 8 months who received solid, semi-solid or soft foods in time was increased from 89.4% to 91.6%, while there was no statistically significant. The proportion of 6-23 month-old infants who received minimum dietary diversity increased from 55.6% to 60.3% ($p < 0.01$). The differences of the proportion of infants who received minimum meal frequency was no statistically significant between before and after the intervention. The nutritional intervention using Yingyangbao showed the significant effect for improving infants aged 6 to 23 months anemia status, weight and length. The feeding practices were improved through education in the process of nutritional intervention, while the effect is not significant. It is need for Chinese government to explore new publicity pattern.

Keywords : nutritional intervention, infants, nutritional status, feeding practice

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