

Analysis of the Reasons for the Rise of the Milk Powder Market in Shanghai in Modern Times: Based on the Analysis of the Shanghai Milk Powder Market from 1920s to 1930s

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Abstract

Milk powder was introduced to China as early as after the Opium War. But Chinese milk powder market was not established until the early twentieth century. Through the investigation of the milk powder market in Shanghai by "Shen Bao", in addition to the breakthrough of milk powder production technology and its unique advantages, the emergence of new demand for milk powders and the market crisis of the traditional way of hiring milk also provide rare business opportunities. With the increase in milk powder merchants and milk powder consumption, huge market profits have given birth to China's milk powder industry. In the fierce market competition, milk powder dealers have spread many modern scientific parenting concepts while carefully arranging various marketing campaigns, and have promoted the development of the government's public childcare cause. With the rise of the milk powder market and the formation of stable consumer groups, the profession of wet nurse has gradually withdrawn from the stage of history. While bringing a new concept of consumption, it has also promoted the transformation of the social identity of mothers and women.

Keywords

Chinese Modern History; Milk Powder.

1. Introduction

The earliest records about milk powder can be traced back to the Yuan Dynasty in China. According to the records in "Marco Polo's Travels", the Mongolian army in the Yuan Dynasty carried the powder invented by Yuan Hui, which was made from cow and sheep fresh milk and air-dried. Add water and shake it. It can be turned into a mushy food. Modern milk powder originated from the drying-type milk powder production technology invented by Russian doctor Osip Krichevsky in 1802. After various reforms, in 1832, Russian chemist M. Dirchoff invented the first commercial mass production method of milk powder. Started the process of commercialization of milk powder. In 1915, Gerstenberger, an American pediatrician, developed the first infant formula SMA that simulates breast milk, marking the beginning of modern infant formula.

After the Opium War, with the opening of some coastal cities in China, some foreigners began to settle in these cities. At first, milk powder entered China as an imported product just to satisfy Westerners' eating habits of drinking milk. Because traditional Chinese medicine regards milk as a tonic, milk powder was also regarded as a tonic in the early days. Although milk powder has been available in China as early as the 1880s, compared with the booming dairy industry and milk market, milk powder entered consumers' attention a little later.

At present, most of the academic circles study milk powder and milk together when they study the dairy industry, and do not strictly study the two separately. Milk is also used as a research object to demonstrate the modernization impact of dairy products. In recent years, some scholars have listed milk powder as the object of comparative research to discuss the

competition between it and fresh milk. Since milk powder and milk are essentially the same product, and there are few historical materials about milk powder, there are many studies on the formation and development of the milk market, but there are few articles related to the milk powder market. Although milk powder is derived from milk, it has played an indispensable role in the modernization of infant feeding in China. Therefore, this paper will analyze and study the rise of the modern Shanghai milk powder market from the perspective of consumption and sales, taking milk powder as the research object.

2. Growth in Consumer Demand for Milk Powders

In traditional Chinese society, breastfeeding is one of the main ways of feeding babies, and the role of mothers has always played a vital role in the development of young children. But in reality, there are often cases where breastfeeding women have insufficient milk, thin milk, or have infectious diseases and cannot breastfeed their babies due to various reasons. so they have to look for alternatives to feed their babies. Under such social demands, the milk powder market dominated by wet nurses has emerged a long time ago. In addition to the group of wet nurses, milk powder are also an important part of the milk replacer market. In addition to milk powder of cow milk, goat milk and other animal milk and their products, there are also milk powder prepared with grains and water.

Since the end of the Qing Dynasty, with the introduction of modern ideas, the state and society have paid more and more attention to children, and the research on the healthy growth of infants and young children has also continued to deepen. According to the law of infant growth, there is no obvious regularity in breastfeeding in the first few days of birth, but with the repeated cycles of breastfeeding times and time intervals, a fixed breastfeeding law will be formed within two weeks to one month after birth: On average, breastfeeding every 2 hours during the day and once or twice at night. If the infant's weight gain is slow and cannot meet the standard, it is necessary to increase the frequency and amount of breastfeeding as appropriate. The recommended breastfeeding times for infants and toddlers are as follows:

Table 1. Recommended times of breastfeeding(per day)

age	2~3 months	4~5 months	6~8 months	9~11 months	11~12 months	Over 12 months
Breastfeeding times (daytime)	6~7 times	5~6 times	4~5 times	3~4 times	2~3 times	2 times
breastfeeding times (at night)	1 time	1 time	Not need	Not need	Not need	Not need

However, the specific number of breastfeedings varies depending on the baby's own conditions, and infants cry when they are hungry. In most cases, infants breastfeeding more frequently than the above table. Although the way of feeding babies is becoming more and more scientific, feeding young children is still very laborious and time-consuming. Especially when the baby is suddenly hungry and crying in the middle of the night, it is extremely exhausting "hard work" for their mothers.

So at that time, some new demand groups appeared in the milk powder market:

2.1. Professional Working Women

With the introduction of the achievements of the modern industrial revolution into China, the traditional family system has been greatly impacted. The continuous development of the capitalist economic organization makes the tasks of production within the family increasingly

narrow, so the members of the family will inevitably join the production relations of the society. In the process of transformation of the traditional family system, rather than saying that working women are liberated from the traditional family system, it is better to say that the environment forces them to leave the family. When the husband's income is not enough to support the whole family, they have to sell cheap labor in order to survive. Especially in modern Shanghai, there have been many small families where both husbands and wives have to devote themselves to productive labor. They have to work from morning to night every day, so it is difficult to find time to nurse their babies. If they choose to temporarily lay down their jobs in order to raise their children, it means to a large extent that they will not have a stable source of income for a long time. It's simply a "disaster".

At the same time, with the rise of the women's liberation movement since the May 4th Movement, in metropolises like Shanghai, more and more women have begun to get rid of the shackles of traditional feudal concepts, and they have received education to find suitable positions in society. , to contribute to the progress of society. Therefore, in Shanghai, professional women have become a trend of social development. However, due to the late start of China's modernization, compared with the relatively complete parenting policies and childcare systems in Europe, America and the Soviet Union during the same period, China's infant parenting policies and supporting public service facilities have developed relatively slowly. Chinese women are not like the women in the Soviet Union. They don't need to hire a wet nurse or make milk powder or wash diapers when they have children. They only need to send their children to the nursery school set up by the state, and they will wear white clothes. Female nurses and babysitters in white hats take care of them. Therefore, this type of women quickly became potential consumers of the milk powder market. In order not to increase too much pressure in their lives and at the same time their children could thrive, they hoped to be able to find more expensive nurses than to hire expensive wet nurses. An economical and convenient way to replace milk.

2.2. Modern and Fashionable Women

For women in better-off families, they do not need to engage in excessive labor and production, and the trivial household chores can be done by hired servants. As a result, in Shanghai, where money is intoxicated, many women from wealthy families are obsessed with the enjoyment of material life, and their main task in the family is consumption. Through the investigation of some literati at that time, it was found that the favorite pastime of Shanghai housewives was mahjong, and mahjong was not limited to the popularity of uneducated housewives, but more like an epidemic. In their daily life, they often wake up from their dreams when the morning sun is already in the air. After waking up, they are dressed up and put on heavy makeup, and they are most concerned about the current craze and entertainment projects. Keeping up with the modern wave and busy with all kinds of communication, they are willing to spend less time on nursing their babies. At that time, the term "beautiful mother and bright wife" appeared, which was used to describe those women who became mothers but left their children to nurses to take care of; women who clearly did housework but didn't care at all, only caring about how beautiful and how they were entertained.

In addition, some "new theories" in order to maintain women's attractiveness to men at that time also had a great impact on breastfeeding women, such as the theory "preservation of breast beauty", which was admired by the most modern girls in Shanghai. It is said that to protect the beauty of the breast, the first thing is to not feed the baby. Once feed their babies, the beauty of the woman will fade away quickly. At that time, Mr. Tang, who had received higher education in a domestic university, also believed this theory. In addition to the enthusiastic advocacy of movie stars and modern girls, this argument that advocates maintaining the natural curvaceous beauty of women is also practiced by high-level intellectuals. Naturally, many urban women in

Shanghai are also affected by this argument. There are many "new women" who hire a wet nurse because they do not want to damage their figure by breastfeeding.

At that time, there were many opinions criticizing this kind of phenomenon in the public opinion. The complexity of the master-servant relationship caused by the employment of wet nurses and the constant attention paid to the health of infants by the society made them look forward to the emergence of a better way of breastfeeding to replace traditional wet nurses.

3. The Crisis of the Way of Milk Replacement by Wet Nurses

Traditional Chinese medicine believes that human milk is flat in nature, sweet and salty in taste. Human milk hot clothing can nourish the five internal organs, enrich the essence, moisten the dryness, and nourish the blood deficiency. In addition to being an important food for feeding babies, human milk is also regarded as an extremely precious health supplement. Feeding human milk to babies is not only the most nutritious, but also gives the baby unlimited resistance to all diseases. After the May Fourth Movement, with the spread of scientific and progressive ideas, people made a detailed comparison of the ingredients of human milk, cow milk, and goat milk:

Table 2. Ingredient comparing

Element	milk	goat milk	human milk
moisture	87.20%	82.80%	87.40%
protein	3.60%	5.70%	2.30%
Fat	3.70%	7.10%	3.80%
carbohydrate	4.90%	4.20%	6.20%
Ash	0.70%	0.90%	0.30%

Both the modern medical community and the society at that time generally recognized the primacy of breastfeeding and believed that human breastfeeding was the best choice. Therefore, at that time, families with babies were more inclined to hire wet nurses to help with the feeding of the babies. According to the records at the time: "In Shanghai, seven or eight out of ten employ women." And in Suzhou, "employing maids, hiring nurses, nine out of ten are like this." However, with the prosperity of the wet nurse industry, negative reports about wet nurses in the society are also increasing.

3.1. A Tough Nut Nurse

The modernization of China is a long time, and the professionalization of nurses is also a long time. Although Shanghai can be regarded as the vane of China's modernization, the traditional concept of master and servant and the feudal ideology that men are noble and women are inferior still influenced the social atmosphere at that time. At that time, most of the women working as wet nurses in Shanghai were poor people in their families, either volunteered or were introduced to be wet nurses in order to support their families or their children died prematurely.

Like other employed persons in the family, wet nurses should belong to the level of servants or servants in the family status at that time. However, the work and responsibilities she undertakes have certain particularities, so the identity of the nurse in the family has a certain complexity.

Chinese people have a very strong concept of "passing on from one generation to another", and every family attaches great importance to their next generation's growth and training. During breastfeeding, milk is the lifeblood of the baby. The milk of a nursing mother is formed by the transformation of qi and blood, so most of the nutrients in the milk are formed by the digestion of the food eaten by the nurse. The amount will also be reduced. Therefore, if you want to make your child fat and healthy, the nanny's food should not be the same as that of other servants. Some nanny's food is almost the same as that of the owner, and the slightly richer family will regularly give them according to the needs of the child's growth and development. The nanny prepares special supplements. At the same time, the physical and mental health of the nurse during breastfeeding will also affect the quality of the milk, and the baby sometimes needs to breastfeed at night, so the nurse needs to live in a clean and comfortable environment close to the baby. For example, the nurse employed by the Song family at that time, in addition to the monthly salary of ten yuan per month, also needs to provide the necessary clothing, additional gifts and money during the New Year and festivals, and the daily meals with the employer. Prepare a variety of supplements.

If you encounter a very strong and grumpy wet nurse, once there is friction or conflict, if you encounter a strong host, these wet nurses will show weakness on the surface, and then secretly squeeze out the milk, so that the host's children can't fill their stomachs, What's more, they will vent their anger on the children when the host is not there. If the host is a little weaker, he needs to endure the unreasonable hardship of the nanny. In 1933, a young lady from a family in Hongkou, Shanghai, after being scolded by the nurse for arguing with her nurse, committed suicide by taking poison because she felt that it would be shameful to be insulted by the servants.

Therefore, this made these employers who hired wet nurses very contradictory. On the one hand, they valued their own status and status, and looked down on the servants they hired; Do not let go of your identity to "serve" the hired nurse with a special attitude.

3.2. Unreliable Wet Nurse

With the professionalization of nurses, the frequency of nurses' appearance in the public eye has increased, and there have been many studies and evaluations of this group in the society. By researching the relevant reports and articles that appeared in Shenbao at that time, the author found that many of the articles were conveying the view that it is not safe to hire nurses. It is mainly reflected in the two aspects of morality and health.

3.2.1. Morality

Nursing babies spend almost all day with their wet nurse, who takes care of all aspects of their diet and daily life. The so-called "three images of breastfeeding", so over time, in the gradual growth of the baby, the nurse's words and deeds will have an impact on the behavior and psychology of the child. Different from the wet nurses employed by princes and noble families in the feudal society, the access threshold of moral character and the restraint of code of conduct of modern wet nurses are far less than before. Compared with other service occupations, many women who come to apply for a job as a nurse may be bringing a child for the first time. They have no experience in childcare, and some don't even know the basic knowledge of childcare. There are many news reports about the carelessness and inexperience of wet nurses, and babies suffer in small cases, and in serious cases, babies can be killed. On February 9, 1931, because his wife lacked milk, the Zhu family was introduced by Jiantou and hired a Shaoxing nurse to feed him at noon the day before. Unexpectedly, because the nurse was asleep and neglected to observe, the child was suffocated to death in the bed that night. Among them, it was not discovered until the next morning.

What is even more terrifying is to hire those wet nurses with vicious hearts and bad conduct, because a person's moral character often takes a long time to get along to find out, so it is

difficult for most employers to detect it at the first time. In addition to the starvation and frailty of the baby caused by the lack of the nurse's milk, there were dozens of incidents reported in the "Shen Bao" about the involvement of the nursing mother in committing crimes. Needle-feeding case": Zhang Dong's family was recommended by Liu Wenqing to introduce Shi Gao's as a wet nurse due to insufficient milk. Because of the lack of milk, it was not in line with the time of introduction, resulting in Zhang Dong's children often being hungry and crying. It was endless, so Zhang Dong was very dissatisfied with it and prepared to resign. But because Shi Gao was in love with the stack, he hated Zhang Dong, so he secretly inserted a broken steel needle about eight minutes into the baby's mouth. Fortunately, it was found in time and no harm was caused.

Except for the very few nurses who committed crimes alone, about 80% of them committed crimes together with others. The arrival of the nurses not only brought instability to the safety of the family, but even colluded with outsiders to abduct, sell, and steal, which seriously endangered the employer. property and life security. Under the multiple propaganda of public opinion and the media, the group of nurses has been labeled as "unsafe" and "unreliable".

3.2.2. Healthy

With the introduction of modern medical theories such as western hygiene, physiology, bacteriology, etc., the criteria for judging the nursing profession are not limited to traditional moral conduct, and the entry criteria for the nursing profession are no longer limited to those of traditional Chinese medicine. The explicit level of "seeing, hearing and asking everything" is gone. Especially with the development of public health in the 1920s and 1930s, the Chinese people also deeply realized that children are the future of the country and the hope of the nation, and the health of children became the main concern of medical and health experts at that time.] Health professionals generally believe that the main source of health problems affecting infants and young children lies in the nurses employed by families. When parents hire nurses, they often ignore some hidden diseases and viruses that nurses carry, such as syphilis, tuberculosis, smallpox, etc. These diseases are very harmful to the health of infants.

Although the medical and academic circles only advise parents to pay attention to the physical health of the nurse and whether she has related diseases when hiring a nurse, it has been over-interpreted in society, and the nurse is regarded as a dirty and unsanitary virus. The carrier, coupled with the fact that some infants who died prematurely due to illnesses were found to have an inevitable connection with the wet nurse, which made the wet nurse group have a serious reputation crisis in the society. This series of incidents had a profound impact on the psychology of the wet nurse group and the social attitude towards the wet nurse group. Although the government issued the relevant access standards for the wet nurse industry in the 1930s, relevant hospitals and institutions have also opened special The Nurse Medical Examination Program is designed to reduce the possibility of employers hiring sick nurses, but the negative relationship between nurses and health is deeply imprinted in people's minds.

"Difficult to serve" and "unsafe" became the negative stereotypes about the professional group of wet nurses at that time, which made the market of wet nurse industry face unprecedented challenges, and also provided healthy, safe and convenient milk powder for the development of Chinese milk powder market A rare opportunity.

4. Unique Advantages

The early milk powder production process was relatively rough. During the process of dehydration and drying, the original nutrients of the milk were lost. Therefore, the milk prepared with milk powder is not much different from ordinary milk in terms of color and taste. In terms of nutritional value, milk powder is far inferior to other milk powder such as cow's milk. It was not until the British William Newton invented the vacuum dehydration production

process in 1837 that the problem of nutrient loss during the production of milk powder was solved, so that the milk powder retains the original nutrients of milk to a great extent. In 1877, American Parcy invented the spray method to make milk powder, which marked the maturity of the milk powder production process. This method is to vacuum condense the milk to a quarter of the original volume to become concentrated milk, and then spray it in a mist form to have a hot powder. In the air drying room, the powder is made into powder after dehydration, and then quickly cooled and sieved to make the finished product. Compared with milk, milk powder is made in a way that makes it very flexible and controllable and more hygienic and safer. For example, other nutrients can be added during the drying process. In particular, the invention of SMA makes milk powder to achieve the level of "breast milk", and in some respects even surpass other milk powder of the same period.

4.1. Long Shelf Life

It is not easy to spoil and can be stored for a long time, which is the most significant advantage of milk powder compared with other milk powder at that time. At that time, milk, which was one of the milk powders, showed a trend of "booming in winter and weak in summer" in the consumer market, largely due to the fact that fresh milk was easily spoiled in summer. In addition, the area where the dairy farm is located is hot and humid in summer, and there are many mosquitoes, which greatly increases the probability of bacteria in the fresh milk produced by the dairy cow. Therefore, for families that use milk as milk powder, feeding cow milk actually has certain risks. Once the spoiled milk is fed to the baby, there is a great probability that the baby will get sick. In the process of making milk powder, the moisture in the milk is removed, and at the same time, it is vacuum-treated during the canning process, so that the microorganisms in it are not easy to survive. Therefore, milk powder is less prone to spoilage than fresh milk, and the storage time is longer.

4.2. Safe and Convenient

Milk powder was also called "disease-free wet nurse" at the time, and many milk powder companies often used wet nurses as comparison objects in advertising to further highlight their safety and hygiene advantages. Huimin Milk Powder introduced in the advertisement that their "milk powder nurse" is not only full of nourishment, does not carry infectious diseases, is physically fit and will never get sick, but also will not be lazy or dereliction of duty. Milk powder is not only nutritious, but also will not cause problems such as insufficient milk of the wet nurse, carrying diseases, etc. At the same time, choosing milk powder as a milk replacer for infants can also fundamentally eliminate the harm to family relations and life and property safety that may be caused by employing wet nurses. reliable.

At the same time, the preparation and feeding of milk powder are also very convenient, and it is possible to feed the baby anytime, anywhere. Since ordering fresh milk is delivered regularly and quantitatively every day, there are some unsolvable drawbacks. For example, when milk is temporarily needed, but it is delayed or out of stock due to some special circumstances. Buying milk powder is equivalent to hiring a "cows" in your home. In order to make milk powder more convenient, some milk powder companies also donate a special powder Gu for making milk powder. When babies are hungry, they only need to Add cold boiled water or boiled water to the powder mix first, then add the milk powder, shake it with your hands, and then pour it into a feeding bottle to feed.

4.3. Easy to Digest

The large amount of protein contained in cow's milk cannot be absorbed and digested by everyone's stomach. Dr. Steiberg, the famous American doctor once pointed out that cow's milk is suitable for the stomach of a calf and not suitable for the stomach of a baby, because the milk is not suitable for the stomach of a baby. It is too thick and contains more oil than human milk,

which is not conducive to the digestion and absorption of infants. In addition, cow's milk should not be stored for a long time, especially in summer, it is very easy to deteriorate, so infants are prone to loss of appetite, diarrhea, constipation, and vomiting. , indigestion, weight loss and other symptoms. At that time, there were still "every summer and autumn, infants died of gastrointestinal diseases because of this. I don't know how many." related reports.

In the process of heating and drying fresh milk to make milk powder, the protein clots in the original milk become smaller and softer, making it easier to digest. Therefore, switching to infant formula feeding not only does not reduce the nutritional content, but also is less prone to indigestion. Even those elderly people with weak spleen and stomach and those suffering from indigestion can take milk powder instead of cow milk to nourish their bodies and supplement nutrients.

In addition to the above three points, in terms of price, milk powder is also far cheaper than cow milk and the cost of hiring wet nurses. In 1923, the average price of a bowl of milk was more than one dime, but using milk powder to prepare the same volume of milk only required about two-thirds of the price of milk. At the same time, compared to fresh milk from local cowsheds, many milk powders are sourced from cows in Western countries, and their quality is higher than that of cow milk. At the same time, according to the prices in the early 1930s, the cost of hiring a wet nurse was ten yuan a month, while a can of Huimin milk powder cost three yuan. On average, a nursing baby needs to consume one and a half cans of milk powder per month. Compared with the nanny's monthly fixed salary, milk powder is nearly four yuan cheaper. If you include the nanny's monthly daily expenses, food, drink, housing and clothing, as well as the allowance for festivals, it can be cheaper.

With the rise of the milk powder market, the consumption of milk powder is also increasing rapidly. In 1925, the American Baohua Company even published: "Baohua dry milk is in short supply due to the extremely enthusiastic buyers. We are very sorry for running out of stock in an instant." Since most of the milk powder on the Chinese market in modern times was imported, in the absence of specific statistics on milk powder consumption, it mainly relied on changes in the customs milk powder import quantity to reflect the changes in milk powder market consumption. According to customs records at that time, in the nine years from 1923 to 1931, the amount of imported milk powder in China increased from about 200,000 taels to about 1.4 million taels, with an average annual increase of about 130,000 taels.

5. Conclusion

Although the milk powder market developed extremely rapidly during this period, milk powder has not yet been popularized in everyone's daily life, but for some professional women who started to use milk powder for feeding, they no longer have to worry about feeding babies will affects their job, and the appearance of milk powder also makes the feeding of the baby more convenient. More and more articles and studies on how to feed babies published in "Shen Bao", even have many prototypes of the current scientific parenting methods. The rise of the milk powder market has brought a brand new thing and established new consumption concept in China. At the same time, milk powder has brought about modern baby feeding concepts and methods, which has also brought about a certain change in the social identity of women who became a mother.

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