



# IDEALOGY

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# IDEALOGY JOURNAL

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### INTRODUCTION

Idealogy Journal is a biannual journal, published by UiTM Press, Universiti Teknologi MARA, MALAYSIA. IDEALOGY is a combination of the words IDEA and LOGY whereby the word IDEA refers to any activity or action that can lead to change. On the other hand, the word LOGY refers to the understanding towards a certain group or thought, that is often related to the creation of the idea itself. So, IDEALOGY is a platform for those who have ideas to share in journal form. The IDEALOGY Journal is spearheaded by the Faculty of Art & Design, Universiti Teknologi MARA (Perak), however the scope and theme applied were broadened to cover Arts & Social Science. This journal is purely academic and peer reviewed (double-blind review) platform. It caters to original articles, review paper, artwork review and appreciation, exhibition review and appreciation, and book reviews on diverse topics relating to arts, design, and social science. This journal is intended to provide an avenue for researchers and academics from all persuasions and traditions to share and discuss differing views, new ideas, theories, research outcomes, and socio-cultural and socio-political issues that impact on the philosophical growth in the contemporary events.

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# Emotional Design for Children's Food Packaging

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## ABSTRACT

*Children's food packaging is the most diverse and colorful of packaging designs. The difficulty lies in reflecting the characteristics of children's food, but also making children associate with it through the packaging, so that the packaging design can bring them more fun. Children as a consumer group have their own uniqueness. Children's physiological and psychological development different from adults in terms of food concerns. Some designers do not pay enough attention to the cognitive psychology of children, resulting in many children's food packaging lacking fun and not fully reflecting emotional care. This study introduces the theory of emotional design into the children's food packaging design, combining the knowledge of five senses design and other related fields to establish the emotional relationship between children and children's food packaging. Through literature review and data survey analysis, scientific and objective design principles are established. A questionnaire survey was used to understand children's preferences for packaging. 300 primary school students aged 7-12 were studied, and the results showed that food packaging that meets children's emotional needs can stimulate their desire to buy.*

**Keywords:** *Childhood, Children's Food, Packaging Design, Emotional Design, Five Senses*



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## 1. INTRODUCTION

Against the backdrop of rising China economic level, people have finished the era of monetary scarcity and gradually entered a moderately prosperous society in all respects. In recent years, despite the rapid development of high-tech, many people are apathetic and not humane. People are no longer just pursuing the satisfaction of monetary needs, but more pursuing the satisfaction of spiritual needs and the need for emotional care. In terms of packaging design, consumers are no longer satisfied with the basic functions of goods, such as protection and portability, but also require beautiful and good-looking styles, color coordination, and good service and built the experience for them, which determine whether consumers buy them or not. Only when consumers are truly delighted, and their functional and psychological needs are met, and the product with practical value as well as emotional value, can purchasing power be effectively increased.

With the gradual implementation of the two-child policy in recent years, the number of children has multiplied and there are around 400 million children in China now. If you want to be outstanding among numerous children food packaging, you must take into account psychological cognitive development of children. They are relatively sensibility and prefer to use their subjective feelings to choose food, it is common that the packaging that bright color, interesting images and novel shape are more attract children's attention. Children food packaging is not only visual image representation, but also deep into

children's inner world, exploring their emotional appeals and realizing emotional value of food packaging. In addition to the visual design, designers should also consider packaging structure design and opening mode design, which make experience more interesting and can increase interaction with children.

Therefore, combining emotional design theory with children food packaging design, taking children's emotional appeal as springboard. To shape good sensory experience by studying children food packaging and stimulating their vision, hearing, touch, smell and taste, it will be easier to move children's hearts, attracting their attention and enhance the added value of the products, opening up new perspective of children food packaging.

## **2. EMOTIONAL DESIGN THEORY**

### **2.1 The Connotation of Emotional Design**

The core concept of emotional design is to provide consumers with good emotional experience. Through design to connect beauty and emotion and to establish a connection between objects and people. Emotion reflects personal experiences, associations and memories (Bi Yi, 2016). The most important aspect of emotional design is to create empathy with consumers, presenting information about product positioning in the form of words and images that help consumers understand the product characteristics, thus satisfying their desires and building their loyalty for the brand (Shima H. Common, 2009).

Emotional design has two core connotations. On the one hand, it is about stimulating consumers positive emotions, such as pleasure, comfort and humor, through a rich variety of graphic symbols, textual language and various innovative design expressions. On the other hand, different people and different scenarios will make users have different use feelings. Emotional design should produce appropriate emotional experiences for a certain type of people in suitable scenarios, and make its psychology have a certain creativity, have a certain imagination space, to realize the value of self-identification.

### **2.2 Three Levels of Emotional Design**

The American cognitive psychologist Donald A. Norman proposed emotional design theory in his book (Emotional Design, 2007). He divided emotional design into three levels, visceral level, behavioral level and reflective level (Deng Shiwei, 2018). These three levels are incremental relationships, and only with the first level will there be the next level.

The visceral level is prior to consciousness and is mainly manifested in the attraction of appearance, material and color for consumers, forming visceral level that completely unconscious and unrelated to function and practicality. The visceral level has nothing to do with personal experience, education, age or ethnicity, and do not need verbal communication or interpretation, it is innate and instinctive. This level is particularly important for children food design, children thinking are simple and final choices depend on first impression, unlike adults who transcend their instincts and consider other levels before making decision.

The behavioral level is mainly functional and needs to meet the use needs of the consumer and interact with them in a way that generates pleasure; there are four elements to good behavioral design: functional, understandable, usable, feelings.

The reflective level is the highest level and builds on the visceral and behavioral levels. The reflective level must respond emotionally to objects through the brain's thinking and memory. This level

is related to personal experiences, education and religious beliefs. The reflective design is concerned with the semantic connotations of the brand culture and the product. Firstly, it builds brand identity and recognition by enhancing brand values. Secondly, a good-looking packaging cannot throw away by people, but to reuse, which reflects the concept of green packaging design and extends use time of the package, which can deepen the impression of the brand. Finally, a reflective design can also make people feel emotionally involved.

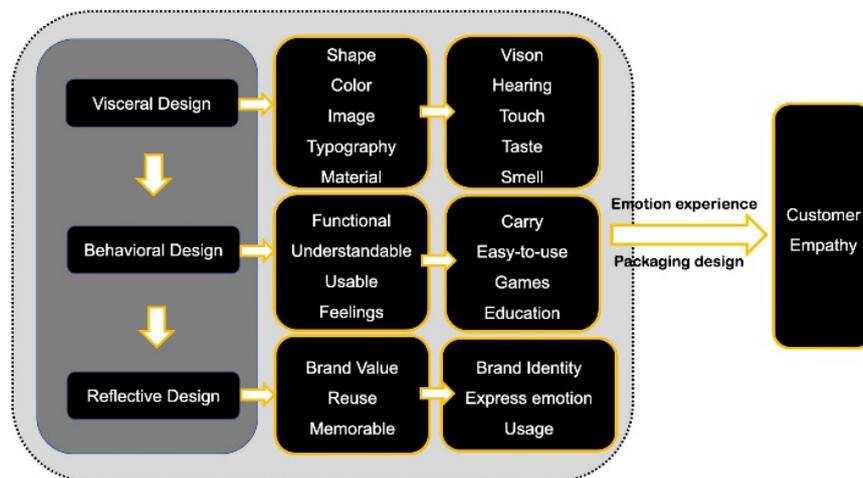


Figure 1. Emotional food design framework

### 3. EMOTIONAL DESIGN METHOD IN CHILDREN'S FOOD PACKAGING DESIGN

#### 3.1 Visceral Design

The visceral design is concerned with the first impression of the product. In emotionally designed food packaging, the visual experience plays a pivotal role, it is the most direct way for people to gain emotional experience. They will have certain recognition for food quality, food value and brand preference through the visual experience of food packaging (Liu Yangyang, 2013). Therefore, it should integrate color, text, graphics and shape to effectively communicate the message to the consumer while satisfying the emotional needs of the corresponding consumer group (Guo Xiaoyan, 2016). As children have less personal experience, and they are more accustomed to using their five senses to perceive the world, children food packaging design can enhance sensory stimulation by improving appearance.

##### 3.1.1 Vision

###### a. Color

Color is one of the most essential merchandising variables in packaging design, and it is often the first thing that catches the eye of customers. To begin with, color can create the illusion of time. Red offers the sense of a longer psychological time than blue when the actual time is the same. As a result, many food packages would use orange, yellow, and red to not only make people joyful, thrilled, and increase their hunger, but also to make people feel like time is passing them by, allowing them to extend their contact and stay with customers (Zhang Yali, 2017).

Moreover, colour can influence the consumer's taste judgement. The taste perception of colour comes from the inherent colour of the food that children are exposed to in their daily lives and the taste

of that food that has been developed over time as a memory. When tasting food, people tend to rely on the taste buds on the surface of the tongue. Taste buds will transmit information to the brain through the nerves when the ingredients of the taste touch the taste buds. Children's taste sense is the most sensitive. Taste is divided into tongue sensory expression and taste expression. Tongue sensory is what we said sour, sweet, bitter, spicy and salty, and different taste sensations also remind us of different colours, and Japanese colourist Kojiro Naito has experimentally concluded that sweet taste is yellow, sour taste is green, bitter taste is black and salty taste is cyan (Jiang Shangwen, 2005). According to research, children prefer sweet food. In contrast, taste expression is referred to firm, smooth, soft and crunchy. Lighter color represents foods that smooth and soft, darker color tend to represent foods that rich and hard. Therefore, color has a certain stimulating and suggestive effect on children's psychology and physiology (Mead J A, Richerson R, 2018).

According to experimental evidence, people consider highly saturated packaged food to be healthier and easily exciting and exciting, while low saturation packaging is relatively unpopular with consumers (Edward S T W., 2013). Currently, some food packaging in the market uses a bionic colour design approach, which is based on the inherent colors of the food itself and secondary colours that harmonize with the main colour palette. Packages with bright colours and uniform tones look more vivid, which are more likely to attract children's attention. Figure 2 shows a packaging DOISY & DAM chocolate package based on the principles of bionic design. The use of abstract geometric paintings in bright and vibrant colours, which make the overall visual effect full of youthful vitality, and also using lemon yellow make consumers think of fresh, juicy lemons as soon as they see it and want to tear open the packaging and eat it immediately.



**Figure 2.** DOISY & DAM Packaging  
(Source: [www.taobao.com](http://www.taobao.com))

## b. Image

Due to children have limited cognitive ability, compare to text, graphics are easier to read and be attracted (Xu Yanyan, 2015). Therefore, packaging graphics are not only conveyed food information and brand characteristics, but also attract children's attention in a short period of time. As graphics are one of the most important elements of packaging, designers should make full use of the intuitive of graphics and expressing the food abstractly in the form of images or directly apply a picture of food, so that consumers can understand food in an intuitive way and thus achieve emotional resonance.

Children food packaging graphics often use expression methods of exaggerated, humorous, and design some cute and interesting cartoon images, so that packaging looks more artistic, lively and infectious. At present, there are several types of children food packaging in China:

- 1) The use of popular cartoon elements as the main body, to attract the attention of children. As shown in Figure 3, Chinese Pasta Milk Yellow Bread, with Winnie the Pooh, Mickey Mouse, Doraemon and other cartoon elements, Mickey Mouse-shaped milk yellow bread through transparent packaging, displayed in front of consumers, intuitively visible.



**Figure 3.** Chinese Pasta Milk Yellow Bread (Source: www.taobao.com)

- 2) Using photographic images of the food itself, the graphics in the form of illustrations is designed. As shown in Figure 4 Miss Children Growing Nutrition Dumplings, shrimp or cod real pictures into the shape of leaves, and then with the corresponding ingredients as branches, while in the form of illustrations to draw a child swinging swings, birds smell the fragrance also come together lively scene, it is so graphic and story.



**Figure 4.** Missing children's dumplings (Source: www.taobao.com)

- 3) Design brand specific cartoon images. As shown in Figure 5, the Little Prince brand 'Strong Potatoes', potatoes as a prototype design a variety of interesting cartoon images, and each image has a positive and inspirational sentence. After see them, children will not only find them so interesting, but also full of sunshine.



**Figure 5.** Strong potatoes (Source: www.taobao.com)

### c. Shape

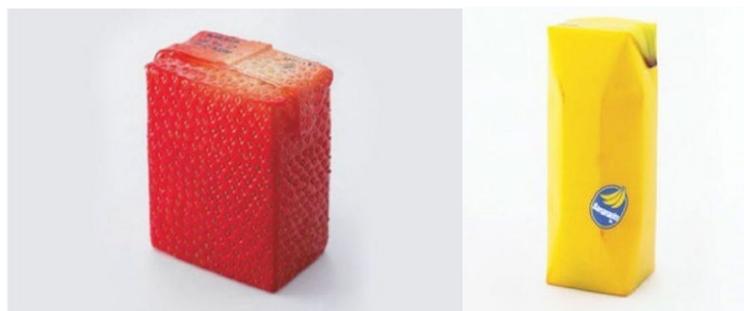
Due to children's cognitive ability to shape packaging is better than their ability to recognize patterns, interesting and unique shapes are more likely to stimulate their senses. According to the study, children prefer exotic food packaging. The children's pizza packaging, designed by Danish designer as shown in Figure 6, a car as model, which accord with children psychology that love toy cars, while also reflecting the concept of fast-food pizza carts.



**Figure 6.** Children's pizza (Source: www.taobao.com)

### 3.1.2 Touch

In packaging design, in addition to pursuing visual beauty of the shape, it also through packaging material to convey a certain touch. Touch is the most intuitive perception of an object, which is produced by people's direct contact with target object. Different textures of the same material will produce different tactile sensations. As shown in Figure 7, Japanese designer Naoto Fukasawa designed a drink packaging, the use of image expression and the corresponding material to make the touch of fruit, so that consumers very intuitively feel the texture of the fruit. The packaging is not only can bring customers visual enjoyment, but also comfortable tactile feeling.



**Figure 7.** Interesting packaging (Source: www.taobao.com)

### 3.1.3 Smell

Smell as a receiver that human body to outside odor information, which can help people to produce emotional responses and bring about sensory experience. For children food packaging, the audience is children, so should try to smell. Many unique tastes for children are very familiar. In fact, there are some food packaging its own aroma in the market now. Although realize cost is so high, there is no denying that this packaging design plays a more outstanding effect. To use packaging to emit odors, natural materials are required and processed through aromas to achieve this effect, such as odor films, or give out food odors in a hollow manner so that they can better communicate with children through smell. But such improvements are worth trying for children's food packaging design, as they are bound to impressive and make children remember this brand.

### 3.1.3 Taste

In children food packaging, enhancement of taste is mainly achieved by packaging color. Different taste will give people different associations, such as seeing red can be associated with chili peppers, spicy taste, see yellow will be associated with bananas, sweet taste, see green can be associated with green apples, sour taste.

Figure 8, the UHA juice gummies is precisely in this method, designing the true shape of fruit on the packaging bag, before opening the bag, let the children seem to feel the real fruit, and think of fruit taste to guess and perceive the taste of gummy, and cause the children's appetite, resulting in buying behavior.



Figure 8. Japanese snack UHA packaging (Source: www.taobao.com)

### 3.1.4 Hearing

The auditory experience is rare in children packaging design, but it is one of the most stimulating designs for children's senses. For example, sound controls are mounted on the outer packaging of children's toys. To attract children's attention by making them hear wonderful sounds and be interested in food packaging and food. Figure 9 is the packaging of a yam crisp, by listening shaking sound when children picking up the packaging, they seem to hear the 'click' of chewing, causing the consumer's appetite, resulting in buying behavior.



**Figure 9.** Packaging of yam crisp tablets (Source: [www.taobao.com](http://www.taobao.com))

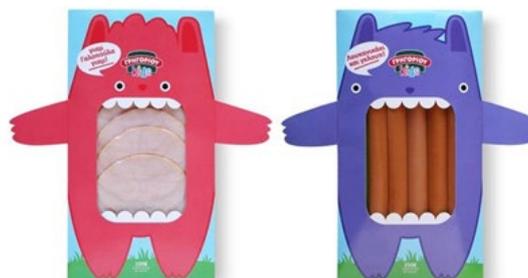
## 3.2 Behavioural Design

Behavior level is no longer concerned with whether the appearance is good-looking, pay more attention to the functionality of goods. The emotional experience of children food packaging can be enhanced by overlapping functions, including easy use function, carrying function, educational function and game function.

### 3.2.1 Easy to use function

The easy-to-use function of packaging, which can be called convenience of opening, it is one of emotional interaction forms between children and food, which can make them feel interesting and could not put them down. It is also an important part of packaging design; different opening methods will bring children a different kind of fun. But children are still in the growth period, mental and physical development is not mature enough, with the psychological characteristics of seeking wonders, seeking new, seeking knowledge. In addition, at the physiological level, their strength is relatively small. Some open ways that puzzle children food packaging need thinking ability and comprehensive hands-on ability. Therefore, designers need to consider many aspects, not only need meet the children's psychology of pursue interest, but also need take into account the safety of packaging and easy to open.

Packaging opening style need to a specific icon or pattern to indicate and guide, children will be eager to pull after seeing the package, but often need to study how to open, in the process can exercise the children's brain ability and hands-on ability, and meet their novel psychology. As shown in Figure 10 a ham packaging, using the shape of the bear cartoon, different flavors using different colors, the middle belly with transparent plastic, so that children more intuitive to see the food itself, attract their attention, so that they can be aware of the direct tearing of ready-to-eat, experience the fun of taking things in the bag.



**Figure 10.** Ham packaging (Source: [www.taobao.com](http://www.taobao.com))

### 3.2.2 Portability function

In addition to ensure that the packaging volume appropriate and interesting shape, we should also improve the portability of packaging. Since children's hands are relatively small, the combination of ergonomics and styling should be taken into account when designing food packaging, making it easy for children to pick up. And combined with the size of their hands, the width of the handle, to ensure the comfort of carrying, so that consumers feel convenient, enhance their contact with packaging pleasure. In addition, should also take into account the weight of food, children's strength is small, it should use lightweight packaging materials, reduce their own weight, easy for children to carry. In the design of packaging structure opening mode, its closedness should be considered to ensure that the product does not deteriorate during the shelf life. For example, Figure 11 shows the Italian organic Alce Nero pasta packaging, different flavors of pasta into different color and shape of packaging, carrot flavor into red carrot shape, corn flavor into yellow corn shape, so that consumers can recognize what taste. At the same time, also made a hollow handbag, can see the food packaging, but also convenient for consumers to take away. Let them enjoy the dual experience that beauty and convenience, so that they are impressed and happy, identify with and remember the brand.



Figure 11. Italian organic bread (Source: [www.taobao.com](http://www.taobao.com))

### 3.2.3 Educational function

The most basic function of packaging is protection function, so that food is not damaged during transport. With the development of the times, people's needs are increasing, the basic functions can no longer meet the psychological needs of consumers, thus it increased convenient function, entertainment function, game function, educational function. During playing and entertainment, many children have the most efficient for learning knowledge. Children are playing while learning has become the dominant way of education in nowadays society, so designers will use the method of teaching through entertaining. It will be related to the product allusions, poetry, crosswords and other clever design on the packaging, which can increase the cultural value of packaging, while improving the product brand identity for customers. For example, the Oriental Leaves of Nong Fu Spring, divided into four kinds of tea, oolong tea, jasmine tea, black tea, green tea, and respectively described the historical origin of each variety of tea on packaging, and with illustration image of the expression, so that consumers can also learn about tea history. Children are simpler, in addition to cultural knowledge, they also need to strengthen the education of safety knowledge. For example, Yi Li QQ Star Children Growing Milk packaging, through using Baidu APP scanning the graphic of packaging. You can enter the children 'anti-abduction safety', 'ride safety', 'home safety' three AR interactive scenes, making children supplement nutrition as well as increase safety knowledge. Parents can also accompany their children to learn together, and play a guiding role. Yi Li QQ Star in this way of fun and vivid to help children and parents correctly understand the risks and avoid risks, so that children's physical and mental can growth better.

### 3.2.4 Game Functions

#### a) 2D Game Interaction

Blending different types of games with food packaging can increase game entertainment. To achieve self-value in the outside environment through children participate into these activities, and they can feel the fun. Some common games have the following: guessing crosswords, mazes, fun questions and answers, crossword puzzles, etc. which all can motivate children's enthusiasm. When children tasting food, they are not only can enjoy wonderful and interesting pictures, but also learn knowledge and pioneering thinking. As shown in Figure 12, the U.S. Fresh and Easy Convenience Chain launched a children's series of cereal, different color packaging represents different tastes, so that consumers are clear at a glance, fun cartoon shape is so easy to arouse children's interest. The back of the packaging has some word-finding games and maze games, which are not only can meet the children's challenge psychology, but also exercise children's logical thinking ability, and fully highlight the fun of children's food packaging.



Figure 12. Children's cereal (Source: www.taobao.com)

#### b) AR game interaction

With the continuous improvement of living level and the emergence of new technologies. It is often seen traditional packaging and gradually no longer can meet the psychological needs of consumers. The combination of traditional forms and modern high technology is the mainstream trend nowadays, and AR packaging is just such a product. Although traditional packaging can make people have a better experience at the behavioral level, it lacks good communication and interactivity, while AR technology can instantly give corresponding feedback based on the users' behavior, and allow consumers to have a lot of fun when experiencing the goods (Zhan Qinchuan, 2018). For example, in 2017, McDonald's teamed up with Auckland AR company Quiver Vision to launch New Zealand's largest AR coloring campaign (Figure 13) to promote the Happy Land package. During the campaign, McDonald is prepared a colorable McDonald's box on the tray mat of the Happy Land package, which children could color in, and then asked their parents to download the Spectacular App on their mobile phones and scan the QR code. Children can move the McDonald's box to any corner or play the 'banana chase' game on the app. In the process, consumers are not only experience the fun of the game, but also the pleasure of using the product.

Now, more and more brands are interested in incorporating AR technology, adding interaction. Making consumers take part in this activity by interesting digital content to attract consumers' attention. In the future, technology will continue to improve, creating more ways to interact and trying more sensory experience, so that consumers feel enough feedback and fun.



Figure 13. AR graffiti (Source: www.taobao.com)

### 3.3 Reflection Design

Reflection design is related to children's past memories and environment in which they are normally exposed. By creating a contextual atmosphere to deepen the emotional experience, you can add puzzle games, children's exclusive design and other forms in the packaging to create a good environment for children. Immersing these children in this environment to perceive and understand.

#### 3.3.1 Increase brand Identity

Consumers will feel pleasure or frustration, positive or negative in the shopping experience, and have a direct impact on repurchases. Good reputation is a communication way of long-standing, refers to the non-commercial transmission between consumers about the service characteristics of a product, purchase, use and other information. Before people buy goods, they know themselves preference, such as appropriate, inappropriate, like, do not like. But this emotion is based on the past reputational awareness, if once used a brand left a bad memory, it will no longer choose products of this brand.



Figure 14. Sanlu milk powder (Source: www.taobao.com)

For example, people found that San Lu milk powder contains melamine incident, consumers will not buy. Building brand awareness and making a good impression on consumers is extremely important. If brand impression was once broken, it can be so difficult to build again.

### 3.3.2 Expressing packaging emotion

Prestige, rareness, and uniqueness play a role in the reflection design. For example, Figure 15 KFC launched a package with a series of toys, some consumers in order to collect small Cat Xiao Qi toys and buy the combo again and again. KFC company uses consumers' love of Cat Xiao Qi to sell their products, and its target consumers are fans of Cat Xiao Qi. The Liu Liu orchard company is also use IP hot spot as a marketing tool. They will celebrity Guan Xiaotong's picture printed on the packaging, and then like Guan Xiaotong's children will love this.

In addition, merchants will take advantage of consumers' desire for goods and the difficulty of buying to develop marketing programs. For example, Evian in 2016 with MY LITTLE BOX to launch a limited-edition packaging, take the Parisian style route, for female consumers, has been unanimously praised. Evian often co-launches design bottles with a variety of designers and fashion brands, while raises their prices, so that ordinary water bottles are given a halo of fashion and luxury.



Figure 15. KFC Cat Xiaoqi Packaging (Source: www.taobao.com)

### 3.3.3 Increase packaging usage rate

Packaging design can not only reflect the food information, but also show cultural connotation. For example, children who go to Disneyland will buy some Disney snacks inside. When children go home and eat the food, they will remember the pleasant memories when they are playing these packaging. Packaging is not only with protection function, but also including the puzzle function, the educational function, etc. These packaging can secondarily use. These are not only low-carbon and environmentally friendly, but also increase the added value of goods, extend the life cycle of goods, while stimulating consumers' desire to buy to increase their memory of goods and meet their emotional needs. For example, Figure 16 shows OHO children's fun food packaging, with chicken, goose and other animal shape as the main body, the shape is rectangular, after the children eat food, according to the folding line will be folded box set up body greeting card appearance. This can not only develop children's intelligence, but also develop their hands-on ability, enhance their sense of three-dimensional. Meanwhile, increasing the OHO in the hearts of consumers a better image. When children see this card will remember the happy memory of eating process.

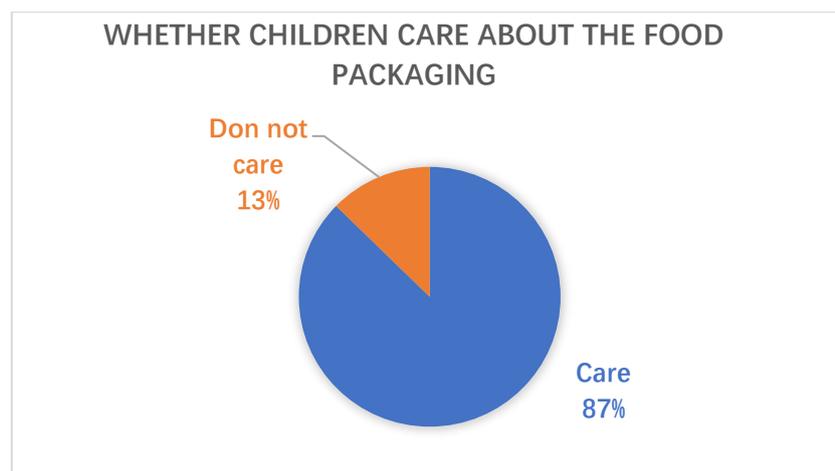


**Figure 16.** OHO children's leisure food packaging (Source: www.taobao.com)

#### 4. ANALYSIS OF SURVEY RESULTS

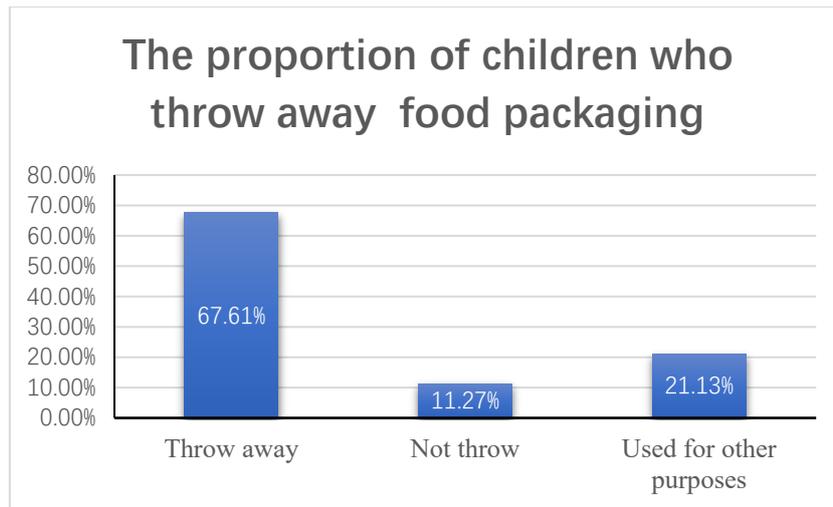
Researcher conducted a study on children's food packaging, which was conducted on children aged 7-12 years old in China, with a total of 300 respondents. The study was conducted in Xi'an Gaoxin NO.1 Primary School, which is one of the largest and best primary schools in the city.

In the survey of 300 respondents, 87.32 % of children chose better designed food, while 12.68 % of children did not. The survey found that excellent children food packaging design can stimulate consumer desire to buy (as shown in Figure 17).



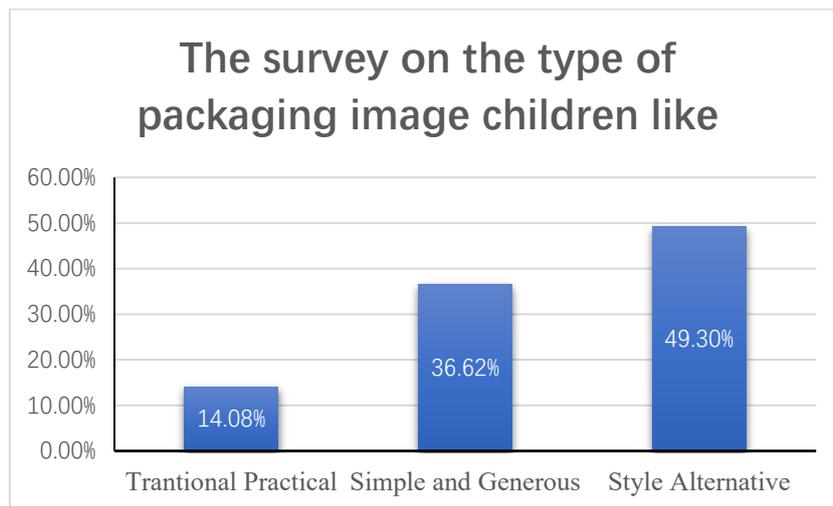
**Figure 17.** Whether children care about the food packaging

Whether children will throw away their packaging when they finish eating food, 67.61 % of children choose to do so, 11.27 % of children choose not and used for other purpose is 21.13%. Therefore, it is necessary to increase the emotional experience of children's food packaging and improve the interaction with children.



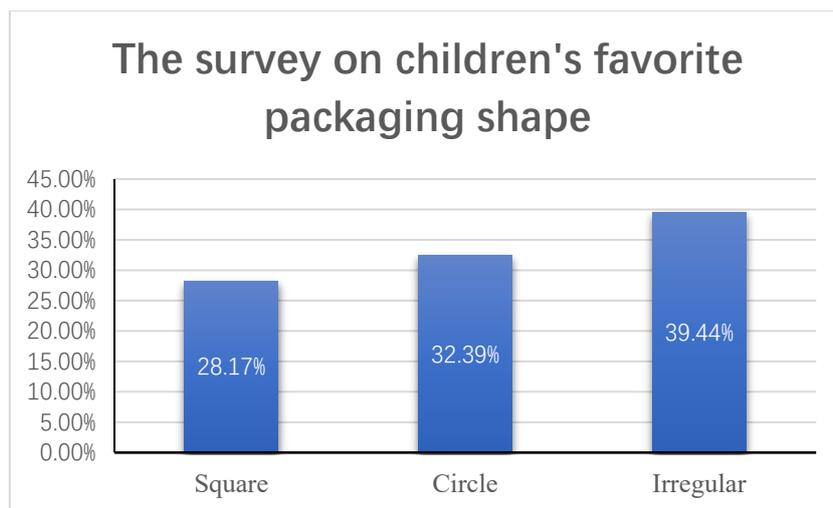
**Figure 18.** The proportion of children who throw away food packaging

Children like the type of graphic packaging design, 49.3 % of children like alternative styles, 36.62 % of children like simple and generous, 14.08% of children like traditional practical.



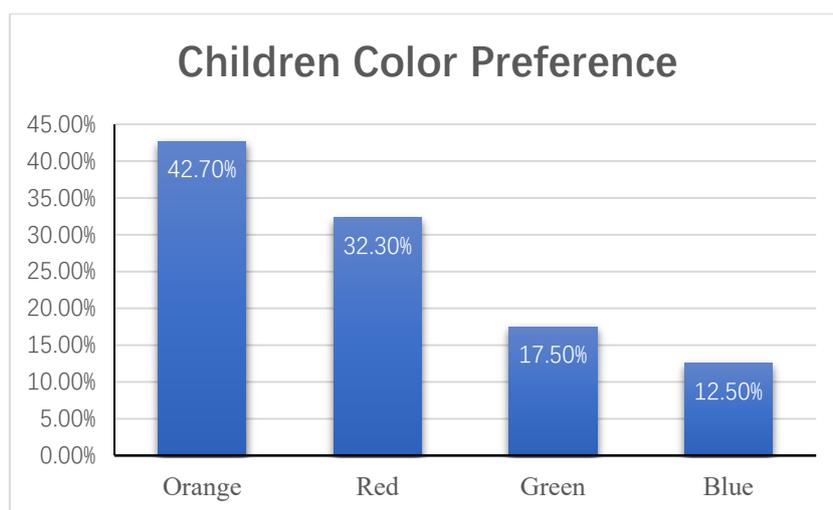
**Figure 19.** The survey on the type of packaging image children like

Children like what shape of food packaging, 39.44 % of children like irregular food packaging, 32.39 % of children like round food packaging, 28.17 % of children like square packaging design. Research shows that children who prefer special packaging are the most likely.



**Figure 20.** The survey on children favorite packaging shape

Children like what color food packaging, 42.7% of children like orange food packaging, 32.3% of children like red food packaging, 17.5% of children like green food packaging, like blue is 12.5%. Research has shown that children prefer warm-toned food packaging designs.



**Figure 21.** Children color preference

## 5. CONCLUSION AND RECOMMENDATION

The combine emotional design theory with children's food packaging design is the demand of the times as well as an auxiliary way for children to grow up healthily. Therefore, we should initiatively innovate, actively explore and inject emotion into children's food packaging design, and innovate various elements in children food packaging design from three levels: visceral, behavior and reflection, including color, shape and function, etc. We should also try to integrate culture into it to show a richer emotional design.

Children food packaging design should strengthen sensory stimulation of children and create rich emotional atmosphere, so as to strengthen the visual effect of the product and leave a better and deeper first impression on children. Children food packaging design should continue to enhance fun, based on the current state of children's psychology, the use of multiple information, so that the packaging design to attract children's attention and fall in love the food.

Children, is the flowers of the motherland, is the future of the motherland. They are emotional and fickle at heart; we should pay attention to their emotional demands. As food is one of the essential items in their life, the message conveyed by the packaging must be full of positive energy. Meanwhile, packaging should be with fun, educational and puzzle will be more popular by children and parents, bringing them a sense of pleasure as well as a visual feast. In addition to the visual impact of the packaging, the safety and environmental friendliness of the materials should also be considered, with high-tech composite materials or biodegradable paper materials being used as much as possible. In addition, more additional functions of food packaging can be explored to extend the contact time between consumers and the packaging, effectively realizing the emotional and practical value of the packaging.

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## AUTHOR CONTRIBUTIONS

Wang Haiying contribute to this research, including data collection, analysis, writing etc. In addition, Dr Muhamad Abdul Aziz Ab Gani instruct me to do this research.

## CONFLICT OF INTEREST

Wang Haiying declared no potential conflicts of interest with respect to the research, authorship, or publication of this article.

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