

Research on User Consumption Need for Car Seat Based on Internet Questionnaire

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Abstract—Based on the characteristics and rules of consumers' behaviors, this paper takes the consumers of automobile safety seats as the research objects, carries out the empirical research on cognition and purchase intention of automobile safety seats, and conducts the survey based on internet questionnaire. Through the analysis of the survey results, it is found that consumers are more sensitive to the price of automobile safety seats, and they pay attention to the brand effect when buying safety seats. Prices, performance, comfort, and understanding are the main factors that restrict consumers' purchase of car seats. This paper puts forward suggestions on products innovation and development based on the research conclusions.

Keywords—market survey; car seat; purchase demand; user research

I. INTRODUCTION

In the emerging markets of car seats, the change of life style, the popularity of passenger cars segment markets and the increasing emphasis on children's safety products will become the important factors to promote the development of car seats market. Infant car seats, on the other hand, are assumed to be ancillary spending in potential growth areas, especially in the absence of mandatory regulations.

At present, the penetration of child safety seats in China is far lower than that in other countries. In the future, with the popularization of compulsory legislation on child safety seats and the restriction of relevant safety standards, the market for child safety seats is broaden and promising. The usage of child safety seats is low in china, and the average usage in some big cities is only about 30%. According to the survey in eight cities including Beijing, Qingdao and Changsha, which is conducted by the research team of *Blue Book of Child Road Safety in China* in 2015, the average use of child safety seats in the study sample was 33.3%, which more doubled than that in 2013 (less than 15%), however, there is still a long way to reach the use rates of 80% to 90% in developed countries. Among the eight cities, the highest usage rate was in Beijing, which reached 39.6%, while the lowest usage rate was in Changsha, which was only 8.8%. Therefore, the market of child safety seats in China has tremendous potential, and it is particularly important to take the chance of developing and entering the market.

In China's current traffic regulations system, there are no legal provisions of national traffic rules to enforce parents to use child safety seats. In recent years, some regions in China have also begun to promulgate new traffic rules to protect the safety of children in cars. By contrast, 96 countries and regions around the world have issued laws and regulations on the compulsory use of child occupant restraint systems, including the United States, Germany, Australia, Japan, Brazil, South Africa and China Taiwan and other countries and regions. It is reported that the children in the above areas suffered a significant reduction in vehicle injury levels after the legislation, such as in the United States and Germany, the number of child road traffic safety deaths has dropped by about 50%. According to the conservative estimate of China Automotive Technology and Research Center, with the promotion of mandatory use of child safety seats in China's legislation, the annual demand for this market will surge to 12 million to 15 million, which will greatly boost the rapid growth of the market capacity of child safety seats. This research conducted internet-based questionnaire on the consumer demand for automobile safety seats in China to provide decision-making reference for the new products development of the child safety seats manufactures in China.

II. RESEARCH PREPARATION AND QUESTIONNAIRE DESIGN

A. Research Purpose

At present, China plays an important role in the production and research of automobile safety seats in the global automobile safety seats market, but local consumers have insufficient understanding of the importance of automobile safety seats, especially in small and medium cities and rural areas. With more and more serious homogeneous competition of automobile safety seats, more and more similar products, and widespread plagiarism, it is difficult for consumers to choose safety seats. Consequently, the focus of the automobile safety seats market research is the mass consumers, exploring the current design factors of new products development, studying the impact of products design highlights on potential consumers of automobile safety seats market, and analyzing the future prospects of automobile safety seats industry and the product development direction in the domestic market.

B. Research Contents and Methods

This survey uses online questionnaires to obtain the required information and suggestions. It analyzed the design of existing car seats from the aspects of brand, appearance, price, use mode, environmental factors, comfort, space occupation and so on. There are 62 online questionnaires are published and collected in total in this survey.

C. Questionnaire Design

The research object of this study is “potential consumers of automobile safety seats”. It investigates the purchase intentions of the sample population, the product cognition and the purchase factors. The questionnaire is designed with clear ideas and reasonable structure, so that the respondents can quickly understand its contents. The structure of the questionnaire is as follows:

1) Questionnaire title:

The title of the questionnaire should be highly concise and generalized on the subject of this survey. Therefore, the title of this questionnaire is “A Questionnaire on Cognition and Satisfaction of Automobile Safety Seats”.

2) Respondent information section:

This section includes the basic information of respondents' gender, age, occupation, education background, income and marriage.

3) Questionnaire body:

The main body of this questionnaire includes the following aspects:

a) A survey on cognition degree of potential consumers to the existing automobile safety seats in the market.

b) A survey on the daily use experience of people who already have automobile safety seats, and a survey on the purchase intention of potential consumers of the automobile safety seats.

c) A survey on the influence factors in the purchasing of automobile safety seats.

It adopted choice questions to investigate the design and the weak points of the existing automobile safety seats, which were divided into single choice and multiple choice.

III. STATISTICS AND ANALYSIS OF RESEARCH RESULTS

A. Description of Sample Data

In this survey, a total of 62 questionnaires were sent online and a total of 62 valid questionnaires were collected. As this questionnaire is distributed online, it effectively gets rid of the geographical restrictions and concentration of people distributed in the field, and it is more objective.

In the survey, males accounted for 56.25% and females accounted for 43.75%. In the process of choosing products, consumers' education degree plays an important role in affecting their choices. Consumers with low education level do not know much about car safety seats, and most of them do not think it is necessary to buy car safety seats. While most of the well-educated consumers know or have used the automobile

safety seats, they are willing to learn about the brand, comfort, use mode and appearance design of car safety seats, and they have higher requirements for reliability and comfort of the products. In this survey, the majority of people aged 31 to 40 accounted for 31.25% of the total population, 30.25% of the people aged 26 to 30, 6.25% of the people aged 41 to 50, 6.25% of the people aged over 60, and only 6.25% of the people aged under 18. The results of the survey on the age proportion of the respondents are shown in Fig.1.

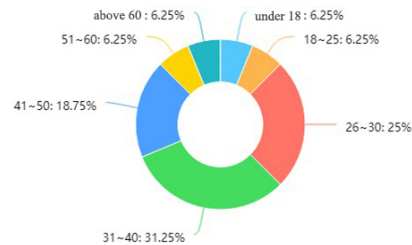


Fig. 1. Age proportion of the respondents

B. Consumers' Cognitive Analysis of Car Seats

According to the survey, most consumers have some knowledge about car seat. In the survey data, 47.25% of the consumers have used car seats products, 33.75% have not used them, 31.33% have seen but not used them, 26.51% have experienced car seats in stores and 26.51% have experienced car seats products. And only 9.64% know nothing about the car safety seats.

According to the survey, 51.08% of consumers know about car seats through internet, 16.87% know about it through friends and family, 6.84% are engaged in related industries, 46.25% know about it through offline experience, and 9.25% do not know about it. It can be seen that consumers mainly know about automobile safety seats through online and offline experiences in physical store.

It is shown in the survey that consumers think it is more important for them to know the specific functions, product types and usable scenarios of automobile safety seats. Specific functions account for 31.25%, product types account for 66.27%, usable scenarios account for 25%, usage methods account for 6.25%, brand account for 6.25%. The details are shown in Fig.2.

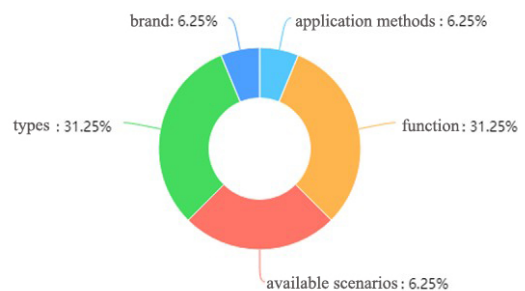


Fig. 2. Products information that consumers want to know

C. Analysis of Consumers' Purchasing Intention for Automobile Safety Seats

It is indicated in the survey that 43.75 % of consumers are willing to buy car seats, 18.75 % of consumers do not intend to buy car seats, and 37.5 % of consumers express they may buy car seats. The survey shows that although the majority of consumers have purchasing intention, there are still many consumers who do not know enough about the importance of car seats. The details are shown in Fig.3.

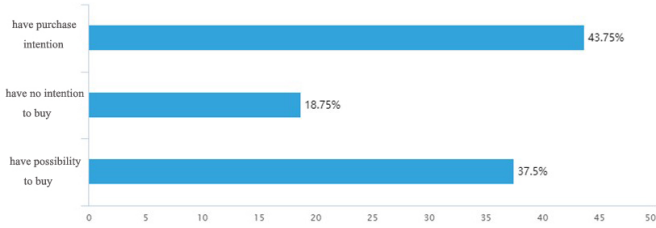


Fig. 3. Consumers' willingness to buy car seats

It is found in the survey that the highest proportion of people with purchasing intention aged 31 to 40, account for 31.25 %, people aged 26 to 30 account for 25%, and those aged 41 to 50 account for 18.75%.

The main factors of unwillingness to purchase are multiple choices, of which "rarely use" accounts for 56.25%, "inconvenient installation" accounts for 50%, "occupy space" accounts for 37.25%, and "unable to use" accounts for 25%. The details are shown in Fig.4.

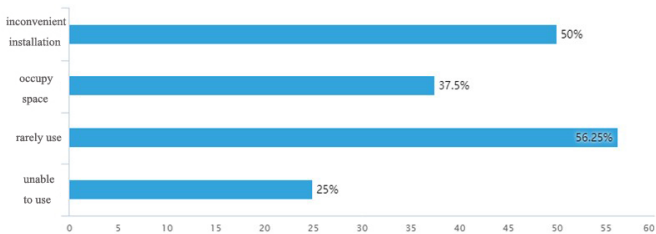


Fig. 4. Main factors of unwillingness to buy

D. Analysis of Consumers' Purchasing Factors for Car Safety Seats

In the survey, consumers can choose 3 to 5 items from the following nine multiple choices, namely "safety factors", "easy installation", "aesthetic appearance", "environmental material", "comfort", "price", "performance", "children's willingness to use", "traffic regulations", and "conformity psychology". Among these factors, safety factors account for 56.25%, children's willingness to use account for 43.75%, traffic regulations account for 43.75%, easy installation accounts for 43.75%, environmental materials account for 37.5%, price factors account for 31.25%, product comfort factors account for 25%, aesthetic appearance account for 25%, and conformity psychology account for 25%. It is evident that safety factors, easy installation, traffic regulations and children's willingness to use are the main factors influencing consumers' purchase. The details are shown in Fig.5.

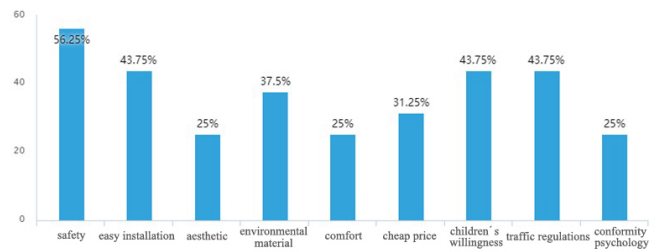


Fig. 5. Factors that influence the sales of the automobile safety seats

E. Consumers' Evaluation of Infant Safety Seats

The analysis of consumers' evaluation after purchasing automobile safety seats in Taobao, Amazon, Jingdong and other online stores shows that the average star rating of popular products in the car seats category is 4.35 stars. 52 of the products are rated with 4.5 stars, and 23 of the products are rated with 4 stars. The evaluation analysis is shown in the figure. It indicates that consumers have a high evaluation of most car seats products. The details are shown in Fig.6.

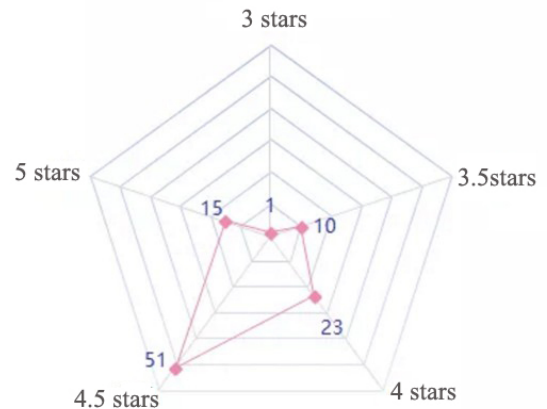


Fig. 6. Star rating distribution of automobile safety seats

From the distribution of star sales of popular products in the car seats category, the sales volume and sales profits of the 4.5 star products are the highest, indicating that the sales of car seats are positively related to consumers' satisfaction. The details are shown in Fig.7.



Fig. 7. The most popular brand market share of car seats

F. Consumers' Expectations for Future Safety Seats

In a survey of consumers' psychological expectations for future car seats, 75% of consumers expect car safety seats to

have good safety performance. 68.75% of consumers want comfortable car seats, 37.5% of consumers choose one-button installation, intelligent and suitable for children's aesthetics. It follows that most consumers pay attention to the safety performance of car seats. The details can be seen in fig.8.

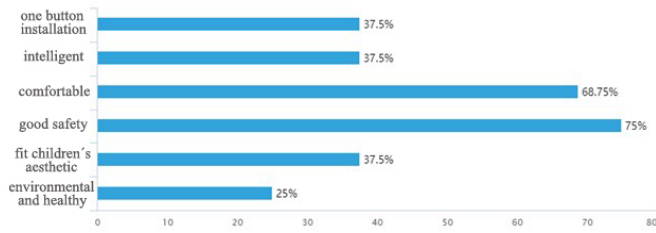


Fig. 8. Consumers psychological expectations for future car seats

IV. CONCLUSION

Based on the characteristics and laws of consumer behavior, this paper investigates the consumers' cognition and purchase intention of automobile safety seats, and analyzes the factors affecting the purchase. This paper takes the potential consumer of car seats as the research object, carries out the empirical research on consumers' cognition and purchase willingness of car seats, and conducts consumer demand research combined internet questionnaire and field investigation. It is found that the main factors that influence consumers' purchase intention are the safety performance, convenience and usability of the products. Consumers focus on the installation ways, environmental materials, and safety performance of the car seats. More consumers will buy car seats as traffic regulations become more stringent. Companies developing and designing car seats should pay attention to the safety, environmental protection, use experience and other factors of the products. And develop automobile safety seats that are easy to operate, with good use experience and good safety protection performance.

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