



Applying Conjoint Analysis to Explore the Preferences of People in Choosing Self-Pay Health Check-Up Services

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Background

- With the increasing aging population and life expectancy, the significance of health check-ups in disease prevention has surged.
- Factors such as location, content, and costs are pivotal in individuals' decisions regarding health check-ups.

Objective

- Apply Adaptive Choice-Based Conjoint analysis (ACBC) to identify the primary considerations influencing individuals when selecting health check-up options.

Methods

- We collaborated with health check-up practitioners and developed an online ACBC survey.
- The survey comprised seven attributes with a total of 22 levels.
- Utilizing Sawtooth Software, we conducted Hierarchical Bayes analysis (HB) to compute relative importance scores and part-worth utility.

Results

- We distributed the online survey links to friends and family via LINE and Facebook, subsequently reaching out to potential customers for health check-ups.
- After five months of data collection, we received 254 samples.
- The key factors influencing respondents' choices include price, completion time, and selection of items within the health check package.
- Regardless of respondents' gender, age or income, these factors remained consistent in their choice of health check package.

Table 1. Characteristics of respondents

| Characteristics | N (%) |
|--|-------------|
| Gender | |
| Male | 122 (48.0%) |
| Female | 132 (58.0%) |
| Age | |
| Under 40 y/o | 87 (34.3%) |
| 40-59 y/o | 132 (51.9%) |
| Over 60 y/o | 35 (13.8%) |
| Income | |
| 1 million and below | 192 (75.6%) |
| 1-2 million | 57 (22.4%) |
| 2 million and above | 5 (2.00%) |
| Chronic disease | |
| Yes | 77 (30.3%) |
| No | 177 (69.7%) |
| Residence | |
| Northern Taiwan | 79 (31.1%) |
| Central Taiwan | 48 (18.9%) |
| Southern Taiwan | 118 (46.5%) |
| Others | 9 (3.5%) |
| Self-pay health check-up experience | |
| At least once | 123 (48.4%) |
| Never | 131 (51.6%) |
| Average number of visits per year | |
| five and below | 151 (59.4%) |
| six to ten | 73 (28.7%) |
| eleven and above | 30 (11.8%) |

Table 2. Part-worth utility of each level

| Attributes | Level | Utility |
|--|---|------------|
| Health check-up center's level | health check-up center's affiliated with hospital | 4.39923 |
| | Independent health check-up agency | -4.39923 |
| Health check-up center's reviews | Own official certification | 1.95047 |
| | Get better reputation than others | -1.95047 |
| Equipment quality | High-grade examination instrument | 26.87819 |
| | Independent examination instrument | -0.34793 |
| | Clean environment and comfortable decoration | -2.42530 |
| | Have private rest space | -9.48122 |
| | Spacious examination space | -14.62374 |
| Associated services | Smooth examination process and short waiting time | 28.47164 |
| | Have multi-specialist consultation | 16.23284 |
| | Provide paper and electronic reports | -3.98839 |
| | Can make an appointment for an earlier examination date | -15.47829 |
| | Online customer service reply within one day | -25.23780 |
| The time required for the examination | Half-day | 33.80292 |
| | One day | 23.27828 |
| | Two day | -57.08119 |
| Selection of health check-up items | Can change the items in the health checkup package | 40.03940 |
| | Can't change the items in the health checkup package | -40.03940 |
| The price of the health check package | One to three million | 153.32856 |
| | Three to ten million | -0.38771 |
| | Ten million and above | -152.94085 |

Table 3. Important score & ranking of each attributes

| Attributes | Total (n=254) | |
|-----------------------------|----------------------|------|
| | Importance Score (%) | Rank |
| Price | 45.46 % | 1 |
| Time for the examination | 16.20 % | 2 |
| Selection of check-up items | 12.11 % | 3 |
| Associated services | 10.06 % | 4 |
| Equipment quality | 8.57 % | 5 |
| Center's level | 4.68 % | 6 |
| Center's reviews | 2.92 % | 7 |

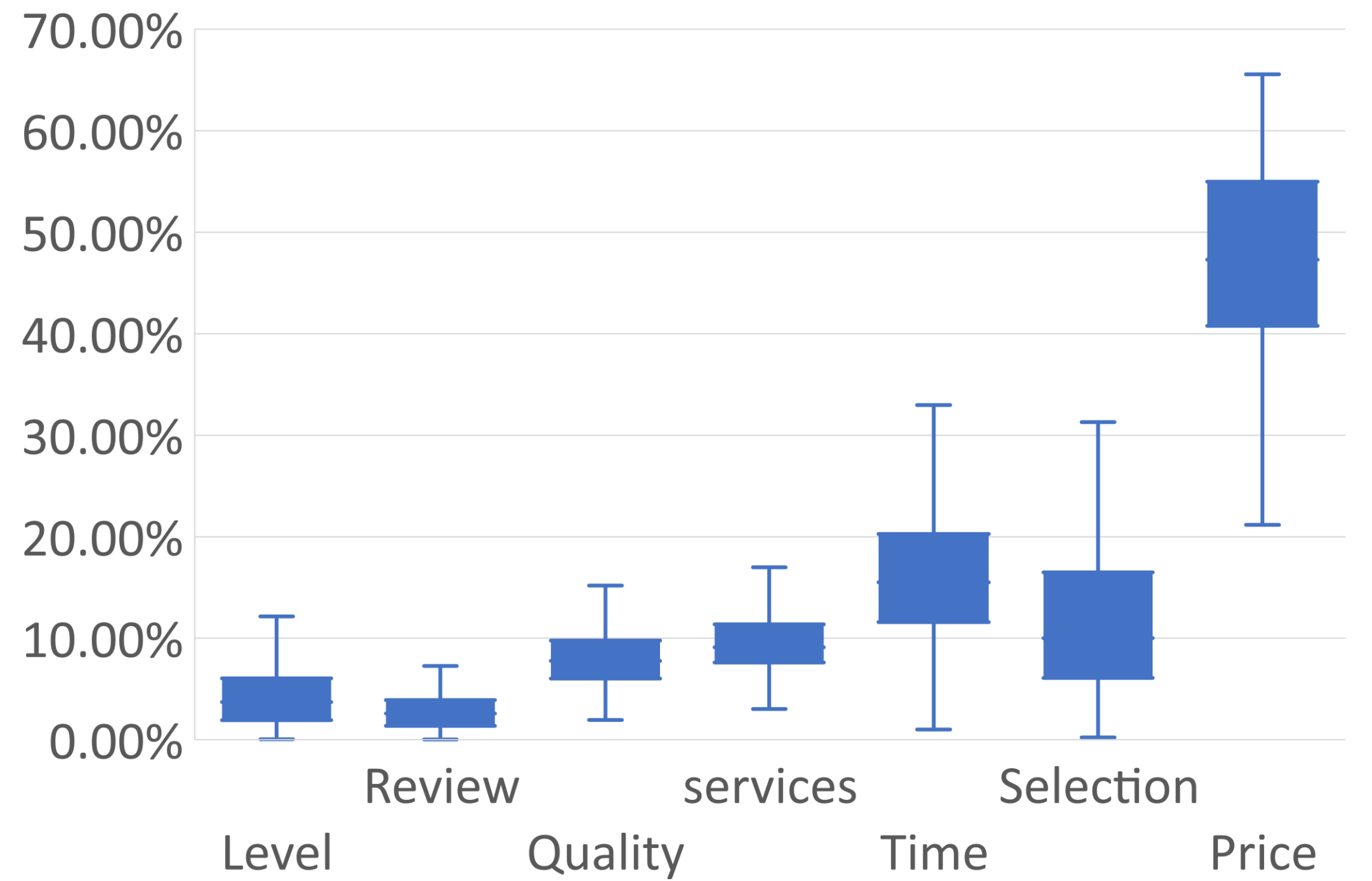


Figure 1. Box plot of each attributes

Conclusion

- The ACBC method would be adaptable based on respondent answers, effectively reveals people's preferences and can be widely used in future marketing research.
- Health check-up center managers should prioritize improving efficiency and adjusting prices to attract a broader customer base, with subsequent consideration for equipment quality and additional services.