

A Study of Consumer Purchase Behavior on Health Food in the Multi-level Marketing

Peng-Tung Chen¹, Yu-Ting Huang² & Yi-Ping Lai³

¹ Department of Business Administration, MingDao University, ChangHua, Taiwan

² Bachelor's Program of Business, Feng Chia University, Taichung, Taiwan

³ Department of Applied Foreign Languages, MingDao University, ChangHua, Taiwan

Correspondence: Yi-Ping Lai, Department of Applied Foreign Languages, MingDao University, ChangHua, Taiwan.

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Abstract

The purpose of the research is to investigate the purchase behavior of Taiwanese consumers regarding multi-level marketing Health Food. The research focused on consumers who have purchased Health Food through multi-level marketing channels and aim to identify consumer behavior patterns. The study primarily focused on Taiwanese consumers and conducts an online questionnaire survey. A total of 322 responses were collected, and after excluding invalid questionnaires, the final sample size for the study was 305, with a utilization rate of 94.7%. Using IBM SPSS 25 for analysis, it was confirmed that among the demographic variables, only consumer age was significantly related to purchase behavior. Significant support was obtained for the association validation of the hypotheses, confirming the significant relationship between salesperson product information exposure and consumer purchase behavior of multi-level marketing Health Food, the significant relationship between consumer purchase behavior of multi-level marketing Health Food and consumer feedback, as well as the significant relationship between consumer feedback and Exposure of salesperson product information."

Keywords: multi-level marketing (MLM), health food, consumer purchase behavior

1. Introduction

In recent years, Taiwan has experienced outbreaks of COVID-19, infectious diseases, an aging population society, and a growing awareness of health among its people. This has led to a shift in the concept of food consumption from simply being full to eating nutritionally and eating healthily. In addition, with the media reporting on health-related issues and dietary recommendations from experts and scholars, the use of Health Foods is suggested in order to keep healthy. People have become more aware of their own health and the concept of nutritional supplementation. Therefore, the demand for Health Foods has grown steadily, making it a worldwide trend. According to the market trends of Health Foods in Taiwan, the value has been continuously growing because of the increasing income of Taiwanese people and their growing emphasis on health and the concept of nutritional supplements. Marking a historical high, the market value reached 21.5 billion NTD with a 10.3% growth yearly in 2020 and increased to 22.6 billion NTD with a growth rate of 17.4 (Chen, 2023). According to the expanded estimation by the ITIS team of Food Industry Research and Development Institute, the overall value of the industry chain has increased. Compared to 143.5 billion NTD in the pre-pandemic year of 2019, the market value presented a growth 19%. In 2021, the size of Health Foods market in Taiwan reached 160.8 billion NTD, and then 170.8 billion NTD in 2022 (Lin, 2003).

Even though the names may slightly differ for health products or dietary supplements, they refer to the same types of products. Health Food Control Act was announced on February 3th, 1999, and the legal term of "Health Food" officially came into effect on August 3th of the same year. In April 2006, Taiwan amended the Health Food Control Act and redefined Health Food as "food with health benefits that is labeled or advertised as having such effects." This revision shifted the focus of regulating Health Food from its intrinsic nature to its external behavior, specifically the claims and labeling in advertisements (Hsu, 2007). Dietary supplements refer to food products with specific health functions, which are classified as special food items. Prior to their entry into the

market, these dietary supplements must undergo strict scientific evaluation procedures in accordance with the law. Health Food refers to food products which contain special ingredients, have the ability to regulate physiological functions, or provide health benefits. These Health Foods are certified by the Department of Health and come in various forms, including functional foods, dietary supplements, health support foods, special nutritional foods, etc. (Chen, Chang & Chiu, 2013, Chang, 2011). Developed using various professional knowledge fields such as medicine, biotechnology, life sciences, nutrition, and food science, these food products are themselves beverages or foods which are rich in minerals and vitamins. They can be used for the purpose of disease prevention (DiPietro, Gregory, & Jackson, 2013). Health Food is a type of food which contains specific ingredients and has the ability to regulate physiological functions and provide health benefits. The key characteristic of Health Food is that it has substantial scientific evidence to support its claimed "health benefits" and is labeled or advertised as such. It is important to note that health food is not intended to treat or correct human diseases, as it is not classified as a medical product. Health Food products must undergo safety, efficacy, and stability testing, and be viewed and assessed by the Ministry of Health and Welfare to ensure their safety and health benefits and then obtain a license (Wu, 2021).

According to a survey of China Grain Products Research and Development Institute (2022), the production value of Health Food in Taiwan was approximately 95.1 billion NTD in 2021, representing a growth of about 4.9% compared to 2020. The main distribution channels for these products currently are online platforms, pharmacies, drugstores, supermarkets, convenience stores, or wholesale stores. In the future, industries are optimistic about the sales potential of online platforms, multi-level marketing, and live-streaming channels. In the early period, direct selling without physical stores was the main distribution channel for Health Food in Taiwan. Since 1999, television shopping and pharmacies have transformed into drugstores, and the gradually entered the Health Food market. According to a 2008 survey by the Food Industry Research Institute, the development of Health Food in non-brick-and-mortar channels such as television shopping, online shopping, and home delivery saw significant growth. In 2007, the combined revenue of three television shopping channels, including Eastern Home Shopping, Fubon Momo Shopping, and Viva Shopping was approximately 40 billion NTD. By 2008, this revenue could reach 50 billion NTD, with the market projected to surpass 100 billion NTD in the future. According to a survey by the Institute for Information Industry in 2008, the size of the online shopping market in Taiwan was approximately 243 billion NTD, with the B2C (business-to-consumer) market accounting for 136 billion NTD. Among them, the online purchase amount of beauty and Health Food products showed the fastest growth, reaching a staggering 49% (Chen, 2009).

2. Literature Review

The purpose of this study is to investigate consumer purchase behavior towards multi-level marketing Health Food. Therefore, this chapter examines relevant literature to establish the theoretical and conceptual framework for the research. The focus of the literature review includes the current status of multi-level marketing sales and consumer purchase in Taiwan.

2.1 Current Situation of Multi-level Marketing in Taiwan

Multi-level marketing (MLM), also known as structure marketing, or multi-level direct selling, originated in the United States in the 20th century. In this sales model, salespeople visit customers' homes to sell products, and customers can also become distributors themselves. Products are sold through a non-retail approach, without physical stores. MLM, a marketing method that involves face-to-face communication with consumers to explain product features, functions, and usage methods, offers consumers the opportunity to choose and purchase products (Lin, 1994). Wu (1993) also proposed that MLM is a concept that integrates product users, retailers, and operators. It is based on the theory of sales model derived from replicated organizational structure. Through the hierarchical structure within the organization, differential benefits are allocated. As a result, it can achieve explosive growth in both the number of participants and company revenue while satisfying the needs of product users, retailers, and operators. Hence, the sales characteristics of MLM can be summarized as follows: the direct seller or salesperson agrees with the consumer on a specific time and location. They will then meet the consumer at the designated location to provide detailed explanations or demonstrations of the product or service. On the other hand, the direct seller or salesperson also hopes that the consumer will continue to repurchase the product after using it, creating a positive cycle of consumer behavior. Fair Trade Commission of Taiwan has released the results of a survey on the development of MLM businesses in Taiwan in 2021. The survey targeted 347 businesses that were still involved in MLM activities during that period. The total revenue generated by these 347 businesses reached 106.845 billion NTD, which was an increase of 4.41 billion NTD compared to the previous year. Among the products sold through MLM, health food products had the highest sales, totaling 70.128 billion NTD (Chen, 2022). Therefore, this study reposes that in the multi-level marketing model, if

consumers are satisfied with the services and products provided by their direct sellers or distributors, it will stimulate their motivation to make repeat purchases. At the same time, they are likely to provide feedback to the direct sellers or distributors and share their experiences with their friends and family, thus perpetuating the multi-level marketing sales model.

2.2 Consumer Purchase Behavior

Consumer behavior is an interdisciplinary subject that encompasses sociology, psychology, economics, and marketing, among other domains. According to Walters & Paul (1970), it refers to all the decision-making behaviors related to the purchase and use of products or services by consumers. The decision-making process and actions taken by consumers when evaluating, acquiring, and using products or services that offer economic value (Demby, 1973). Howard (1989) points out that the purchase behavior is a consumer's consumption behavior in which they spend money and actually purchase a specific product within a certain period of time. Gilbert (1991) proposed that the analysis of consumer purchase behavior indicates that consumers are influenced by intrinsic factors such as motivation, personality, cognition, and learning in their purchase decisions. Therefore, the motivation behind purchasing a product is crucial as it influences the subsequent consumer behavior. According to Schiffman & Kanuk (1991), consumers exhibit behaviors such as seeking, purchasing, using, evaluating, and disposing of products, services, and ideas in order to satisfy their needs. Engle (1993) mentions, consumer behavior involves a series of decision-making processes that occur prior to, during, and after the acquisition, consumption, and disposal of a product or service. Kotler (1997) discusses how individuals, groups, and organizations engage in the selection, purchase, use, and disposal of products, services, experiences, and ideas in order to satisfy their needs. Kotler (2002) indicated a model of purchase behavior which suggests that consumer awareness is influenced by external marketing stimuli, and this awareness then leads to a particular type of purchase behavior through the consumer's decision-making process. The term "purchase behavior" (Wu, Deng & Huang, 2018) refers to the transactional behavior exhibited by consumers after an overall evaluation of a product. It involves the subjective and emotional responses of consumers based on their subjective perception. Consumers give different evaluations to products and ultimately make a purchase decision based on their subjective perception.

Furthermore, scholars studying consumer behavior also attempt to identify theoretical models that explain and predict consumer behavior. Nicosia (1966) introduced the consumer behavior model, which primarily divides the consumer purchase process into a flowchart of decision-making processes. This model simulates and categorizes the consumer decision-making process into four stages of the decision process. (1) the firm's attributes and the consumer's attributes: manufacturers or enterprises transmit product information to consumers through advertising or other media, and after internalizing it, consumers develop attitudes; (2) search and evaluation: after consumers develop an interest in a product, they evaluate the business or enterprise by collecting and investigating information. This evaluation then leads to the motivation to make a purchase or not; (3) the act of the purchase: consumers are influenced by factors such as brand, retailer, and situational factors; (4) feedback of sales results: after the consumer's purchase behavior, relevant experiences or outcomes are stored in the memory of the brain. This allows for personal reference in subsequent purchases of related products and provides feedback to businesses and retailers.

Based on the definitions of consumer behavior from the aforementioned scholars, the study considers that consumer purchase behavior is a series of behavioral patterns that occur when consumers have a demand for a product or service, including the collection of pre-purchase information, acquisition of experiences, and feedback after the purchase. Furthermore, the sales model of multi-level marketing belongs to an individual-centered promotion where products and services are provided to end consumers. In addition to sponsoring charitable activities or organizing sporting events for media exposure, most products in multi-level marketing are taught to customers by direct sellers with relevant product expertise. This enables customers to enjoy a good sales and after-sales service, building a positive reputation through word of mouth, and stimulating repeat purchases, thus achieving the effect of repeat consumption. On the other hand, direct sellers also obtain feedback from consumers on the company, products, service personnel, and more during the interaction process. This allows them to provide more diverse services or develop the most ideal products to meet consumer preferences, thereby triggering the motivation for consumers to make repeat purchases. The Nicosia model, on the other hand, is a model that explores the purchase behavior from the perspective of the buyer's learning process. It examines the process of information exposure, decision-making, and subsequent feedback in relation to purchase behavior. The sales model of multi-level marketing aligns with the consumer purchase behavior model proposed by Nicosia. This serves as the theoretical foundation for the study on "Taiwanese consumers' purchase behavior of Health Food in multi-level marketing".

3. Research Method

This study is conducted by referring to relevant literature, collecting research variables and documents, establishing an empirical model and questionnaire scale, and adopting appropriate data analysis methods. A questionnaire survey method, with "Google Forms" as a survey instrument was used. The study focused on consumers who have purchased multi-level marketing Health Food and employed a non-random sampling method to conduct an online questionnaire survey on consumer purchasing behavior of multi-level marketing Health Food from August to September, 2023. The questionnaire survey was conducted anonymously. The questionnaire includes two parts-- background information of the participants and consumer behavior on purchasing Health Food through multi-level marketing. Background information of the participant questionnaire includes background variables of the respondents include gender (male, female), age (below 20 years old, 21-25 years old, 26-30 years old, 31-35 years old, 36-40 years old, above 41 years old), education level (elementary school, junior high school, high school/vocational school, college/university, graduate school or above), average income (within 30,000 NT dollars, 30,000-50,000 NT dollars, 50,000-70,000 NT dollars, 70,000-90,000 NT dollars, above 90,000 NT dollars), occupation (student, information technology, manufacturing, military or police, mass communication, self-employed, education, finance, service, public service, homemaker, insurance, and others). The consumer behavior survey on purchasing Health Food through multi-level marketing includes three categories of question sets: "Salesperson product information exposure," "Consumer purchasing behavior," and "Consumer feedback."

A Likert 5-point scale is used for measurement in which consumers choose the answer option that best aligns with their personal opinion based on their individual consumption experiences for each question, ranging from "strongly agree," "agree," "neutral," "disagree," to "strongly disagree." The scoring for each option is as follows: "strongly agree" is scored as 5 points, "agree" as 4 points, "neutral" as 3 points, "disagree" as 2 points, and "strongly disagree" as 1 point. Therefore, a higher score indicates a greater level of agreement, while a lower score indicates a lesser level of agreement.

According to the Nicosia model (1966), it is stated that the purchase behavior of consumers is influenced by exposure to information, decision-making, and the actual purchase behavior. After consuming the purchased Health Food, consumers provide feedback to the salesperson, thereby increasing the disclosure of product information to the salesperson. Also, Gilbert (1991) provides consumer purchase behavior analysis is influenced by internal factors such as motivation, personality, perception, and learning. Therefore, personal background is also an important key that affects the generation of purchase behavior. By combining the theories of the Nicosia model (1966) and Gilbert (1991), a framework is proposed as shown in Table 1.

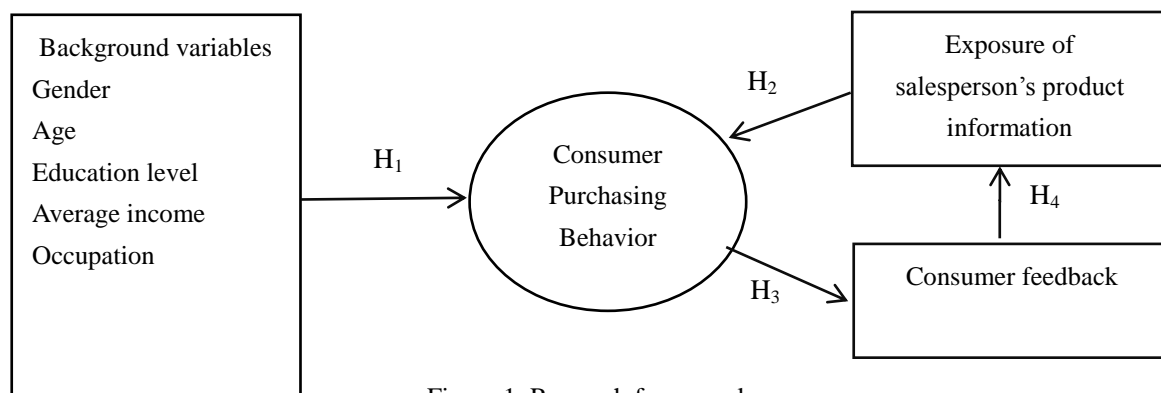


Figure 1. Research framework

The study proposes the following hypothesis:

Hypothesis 1: There are significant differences in consumer purchasing behavior of multi-level marketing health food products based on various background variables.

Hypothesis 2: There is a significant relationship between salesperson's product information exposure and consumer purchasing behavior of multi-level marketing health food products.

Hypothesis 3: There is a significant relationship between consumer purchasing behavior of multi-level marketing health food products and consumer feedback.

Hypothesis 4: There is a significant relationship between consumer feedback and salesperson's product information exposure.

This study aims to investigate consumers who have previously purchased Health Food through multi-level marketing channels. A questionnaire was administered using "Google Forms" as the survey tool from August 27th, 2023, to September 2nd, 2023, and a total of 322 responses were collected. After excluding 17 incomplete questionnaires, a total of 305 valid responses were obtained, resulting in a response rate of 94.7%. Data analysis was conducted using IBM SPSS 25 statistical software package.

3.1 Data Analysis

The collected questionnaire data for the study were analyzed to provide statistical descriptions of the demographic profiles of the respondents, including gender, age, education level, average income, occupation, etc.

3.2 Reliability Analysis

Reliability analysis refers to assessing the reliability and stability of measurement data. It is commonly conducted using Cronbach's alpha coefficient, with higher values indicating higher reliability. The criterion for judging reliability is that the alpha value should be above 0.6.

3.3 One-way ANOVA and Independent Samples T-test

(1) One-way ANOVA analysis was used to analyze variables with three or more groups. These variables include age, educational level, average income, occupation, etc. The analysis aimed to determine if there were significant differences among the groups based on the results. (2) Independent samples t-test analysis was conducted to examine if there were significant differences based on gender background variables.

3.4 Correlation Analysis

The size of the Pearson correlation coefficient indicates the strength of the relationship between two variables. An r value between 0.3 and -0.3 is considered a low correlation. A value between 0.3 and 0.6, or -0.3 and -0.6, is considered a moderate correlation. A value between 0.6 and 0.9, or -0.6 and -0.9, is considered a high correlation. A value of 1, positive or negative, indicates a perfect correlation.

3.5 Regression Analysis

Regression analysis is used to investigate whether consumer behavior in purchasing multi-level marketing health food is positively influenced by variables such as "salesperson product information exposure," "consumer purchase behavior," and "consumer feedback."

4. Results and Discussion

4.1 Descriptive Statistics

The demographic data of the survey respondents are evenly distributed across the valid questionnaires, as explained below: (1) Gender: The survey respondents are distributed by 137 males and 168 females. (2) Age: There were a total of 24 individuals aged 20 or below, 92 individuals aged 21-25, 79 individuals aged 26-30, 35 individuals aged 31-35, 15 individuals aged 36-40, and 60 individuals aged 41 or above. The age group with the highest number of respondents is 21-25 years, followed by the 26-30 age group. The age group of 36-40 has the smallest number of respondents. (3) Education level: There were a total of 8 individuals with elementary school education or below, 112 individuals with high school education, 155 individuals with college/university education, and 30 individuals with postgraduate education or above. From the data, it can be observed that the majority of survey respondents have a college or university education, while the smallest number of respondents have an elementary school education or below. (4) Average Income: There were a total of 74 individuals with an average income of 30,000 yuan or below, 125 individuals with an average income ranging from 30,000 to 50,000 yuan, 59 individuals with an average income ranging from 50,000 to 70,000 yuan, 24 individuals with an average income ranging from 70,000 to 90,000 yuan, and 23 individuals with an average income of 90,000 yuan or above. It can be observed from the data that the majority of respondents have an average income ranging from 30,000 to 50,000 yuan, while the smallest number of respondents have an average income of 90,000 yuan or above. (5) Occupation: There are a total of 20 students, 8 individuals in the information technology industry, 13 individuals in the manufacturing industry, 18 military or police personnel, 17 individuals in the mass media industry, 48 self-employed individuals, 14 individuals in the education industry, 27 individuals in the financial industry, 71 individuals in the service industry, 9 government employees, 7 homemakers, 15 individuals in the insurance industry, and 38 individuals in other occupations. From the data, it can be observed that the majority of respondents work in the service industry, followed by those who are self-employed. Homemakers have the

smallest representation among the respondents.

4.2 Reliability Validation Results

The questionnaire of the "Consumer Purchase Behavior of Multi-level Marketing Health Food" developed in this research, meets the criteria for a good measurement tool in terms of consistency reliability. Consistency reliability refers to the homogeneity among the items that make up the scale. The analysis of Cronbach's α coefficients for each variable shows that the Cronbach's α coefficient for the "Salesperson's Product Information Exposure" variable is .917; for the "Consumer Purchase Behavior" variable, it is .894; and for the "Consumer Feedback" variable, it is .931. Bryman and Cramer (1997) suggest that coefficients above .80 indicate high reliability. This indicates that the scale has good internal consistency reliability. The results are summarized in Table 1.

Table 1. Reliability Scale Analysis (N=305)

Scale/Questionnaire	Cronbach's α coefficient
Exposure of salesperson's product information	.917
Consumer purchasing behavior	.894
Consumer feedback	.931

4.3 ANOVA for Consumer Purchase Behavior Based on Different Consumer Background Variables

This section examines whether there are significant differences in the "Consumer Purchase Behavior" variable based on different demographic variables in the survey sample. In this study, the sample was divided into "two categories", and under the assumption that the two categories do not affect each other, an "independent samples t-test" was used for only one variable, which is gender. For the research sample divided into "three or more categories", a "one-way analysis of variance (ANOVA)" was used, including four variables: age, education level, average income, and occupation. The results of the analysis are described as follows. (1) Gender and consumer purchase behavior: the results of an independent samples t-test are shown in Table 2.

Table 2. ANOVA for Gender Variable and Consumer Purchase Behavior (N=305)

Variables	Gender	N	Mean	Standard deviation	F value	P value	T value
Consumer Purchasing Behavior	Male	137	4.01	.62	.43	.51	-2.07
	Female	168	4.16	.57			

Note. *P<.05, **P<.01, ***P<.001

The average scores for "Consumer Purchase Behavior" in the male and female samples are 4.01 and 4.17, respectively. The homogeneity of variance was confirmed through the Levene's test ($F=.43$, $P>.05$), indicating that there is no significant difference in the variability between these two samples. Therefore, it can be concluded that gender does not have a significant impact on consumer purchase behavior. (2) Variance analysis of age, educational level, and average income on consumer purchase behavior: The results of the one-way ANOVA analysis of respondent age and "consumer purchase behavior" are shown in Table 3. There is a significant difference in "consumer purchase behavior" among consumers of different ages ($F=3.329$, $p=.006$). Overall, the analysis reveals that consumers indeed differ in their purchase behavior based on age. Post-hoc Scheffe's test results indicate that consumers aged 21-25 are higher than those aged 41 and above. The results of the one-way ANOVA analysis of respondent education level and "consumer purchase behavior" are shown in Table 3. There is no significant difference in "consumer purchase behavior" among different education levels ($F=.327$, $p=.806$). Overall, the analysis reveals that consumer purchase behavior does not differ based on education level. The results of the one-way ANOVA analysis of respondent average income and "consumer purchase behavior" are shown in Table 3. There is no significant difference in "salesperson product information exposure" among

consumers with different average incomes ($F=.138$, $p=.968$). Overall, the analysis reveals that there is no difference in salesperson product information exposure based on average income. The results of the one-way ANOVA analysis of respondent occupation and "consumer purchase behavior" are shown in Table 3. There is no significant difference in "consumer purchase behavior" among consumers with different occupations ($F=1.010$, $p=.439$). Overall, the analysis reveals that there is no difference in consumer purchase behavior based on occupation. Based on the previous analysis, the results indicate that there is a significant difference in consumer purchase behavior of multi-level marketing health foods among different background variables, supporting H1. However, this difference is only significant in age.

Table 3. Analysis of the background variables and consumer purchasing behavior (N=305)

Variables	F value	P value
Age	3.329	.006*
Education level	.327	.806
Average income	.138	.968
Occupation	1.010	.439

Note. * $P<.05$, ** $P<.01$, *** $P<.001$

4.4 Analysis of the Correlation Between Salesperson Product Information Exposure, Consumer Purchase Behavior, and Consumer Feedback

Based on the results of the Pearson correlation analysis between salesperson product information exposure, consumer purchase behavior, and consumer feedback, as shown in Table 4, the relationships between the variables are discussed below according to the research hypothesis. (1) The correlation test between salesperson product information exposure and consumer purchase behavior has been found to be statistically significant. The correlation test between salesperson product information exposure and consumer purchase behavior has been found to be statistically significant ($p\text{-value} < 0.01$), with a correlation coefficient of 0.566. This indicates a strong positive correlation between the two variables, suggesting that as the level of salesperson product information exposure increases, consumer purchase behavior also increases. (2) The correlation test between consumer purchase behavior and consumer feedback has been found to be statistically significant ($p\text{-value} < 0.01$), with a correlation coefficient of 0.736. This indicates a moderate positive correlation between the two variables, suggesting that as consumer purchase behavior increases, consumer feedback also tends to increase. (3) The correlation test between salesperson product information exposure and consumer feedback has been found to be statistically significant ($p\text{-value} < 0.01$), with a correlation coefficient of 0.581. This indicates a strong positive correlation between the two variables, suggesting that as salesperson product information exposure increases, consumer feedback also tends to increase.

Table 4. Pearson correlation analysis for salesperson product information exposure, consumer purchasing behavior, and consumer feedback

Variable	Salesperson product information exposure	Consumer purchasing behavior	Consumer feedback
Salesperson product information exposure	1		
Consumer purchasing behavior	.566**	1	
Consumer feedback	.581**	.736**	1

Note. * $P<0.05$, ** $P<0.01$, *** $P<0.001$

4.5 Regression Analysis of Salesperson Product Information Exposure, Consumer Purchase Behavior, and Consumer Feedback

Hypothesis 2: To investigate the impact of salesperson product information exposure on consumer purchase

behavior, the regression analysis results are shown in Table 5. The analysis revealed that product information exposure has a significant influence on consumer purchase behavior, providing support for the Hypothesis 1.

Table 5. Regression Analysis of "Salesperson Product Information Exposure" on "Consumer purchasing Behavior" (N=305)

Variable	β coefficient	Standard deviation	F value	T value	P value
Salesperson Product Information Exposure on consumer purchasing behavior	.567	.047	.566	11.946	.000***

Note. *P<.05, **P<.01, ***P<.001

Hypothesis 3: Regression analysis of consumer purchase behavior in multi-level marketing of health food and consumer feedback

Hypothesis 2 investigated the impact of consumer purchase behavior on consumer feedback, the regression analysis results are shown in Table 6. The analysis revealed that consumer purchase behavior has a significant influence on consumer feedback. Therefore, the H2 hypothesis is supported and deemed valid.

Table 6. Regression Analysis of "Consumer purchasing behavior" on "customer feedback" (N=305)

Variable	β coefficient	Standard deviation	F value	T value	P value
Consumer purchasing behavior on customer feedback	.842	.044	.736	18.952	.000***

Note. *P<.05, **P<.01, ***P<.001

Hypothesis 4: Regression Analysis of Consumer Feedback and Salesperson Product Information Exposure

Hypothesis 3 investigates the impact of consumer feedback on salesperson product information exposure, the regression analysis results are shown in Table 7. The analysis revealed that consumer feedback has a significant influence on salesperson product information exposure. Therefore, the H3 hypothesis is supported.

Table 7. Regression Analysis of "Consumer feedback" on "Salesperson product information exposure" (N=305)

Variable	β coefficient	Standard deviation	F value	T value	P value
Consumer feedback on salesperson product information exposure	.507	.041	.581	12.430	.000***

Note. *P<.05, **P<.01, ***P<.001

5. Results

Based on the analysis conducted using IBM SPSS 25, this research focuses on examining the consumer purchase behavior in multi-level marketing of Health Food in Taiwan. Among the consumer background variables, consumer purchase behavior is mainly influenced by age. Specifically, individuals aged 21-25, who are often recent university graduates entering the workforce, exhibit a heightened emphasis on Health Food due to the external environment changes they experience. This results in a higher level of consumer purchase behavior compared to other age groups. Other variables, such as gender, education level, average income, and occupation, are not influenced. The correlation analysis of salesperson information exposure, consumer purchase behavior, and consumer feedback shows significant correlations. Furthermore, through regression analysis, we found evidence supporting Hypothesis 2, 3, and 4. Hypothesis 2: There is a significant relationship between salesperson product information exposure and consumer purchase behavior in multi-level marketing Health Food.

Hypothesis 3: There is a significant relationship between consumer behavior in purchasing multi-level marketing health food products and consumer feedback. Hypothesis 4: There is a significant relationship between consumer feedback and salesperson product information exposure. This conclusion is consistent with the sales approach of multi-level marketing and the purchasing attributes of Health Food. Multi-level marketing relies on distributors or direct sellers conducting face-to-face product explanations and sales to induce consumer purchase behavior. Distributors or direct sellers also continuously track consumer usage after purchase, and engage in ongoing face-to-face selling. Throughout the interaction between distributors or direct sellers and consumers, they obtain consumer feedback, which serves as a supplement to subsequent sales and face-to-face product explanations with consumers. In the sale of Health Food, consumers often rely on recommendations from friends and family to visit pharmacies or sales points, where they can consult face-to-face with pharmacists or salespeople. After receiving explanations or introductions from pharmacists or salespeople, consumers are prompted to make a purchase. The findings of the study demonstrate that the exposure of product information through face-to-face sales is the primary factor that triggers consumer purchase behavior in the sale of Health Food in Taiwan. Furthermore, the continuous reinforcement of the sales of Health Food is influenced by consumer feedback regarding their experiences with the products after usage.

6. Limitations

The questionnaire survey in this study obtained 305 valid samples. Among the respondents' background information, except for fairly even gender distribution, the proportions of age, education level, average income, and occupation are quite disparate, which may have an impact on the research. In the future, researchers interested in studying the purchasing behavior of consumers of multilevel marketing health products may consider how to evenly distribute age, education level, average income, and occupation in their research. Furthermore, increasing the sample size would undoubtedly enhance the rigor of the research results and contribute to its academic value and reference significance, given the constraints of manpower and time. This study employed a questionnaire survey method, which only makes inferences based on the respondents' choices regarding the questions and cannot fully infer all the factors influencing consumers' purchasing behavior of multilevel marketing health products. As a result, it may lack representativeness to some extent.

References

- Bryman, A., & Cramer, D. (1997). *Quantitative data analysis with SPSS for windows: A guide for social scientists*. London: Routledge.
- Chang, J. (2011). Factors related to the use of health supplements among middle-aged and elderly people in Taiwan. *Taiwan Journal of Gerontological Health Research*, 11, 33-54.
- Chen, H. (2023). Aging population and increased emphasis on health prevention: Health and Nutritional Supplement Market Achieves Five Consecutive Years of Record High Revenue. Retrieved from https://www.moea.gov.tw/MNS/dos/bulletin/Bulletin.aspx?kind=9&html=1&menu_id=18808&bull_id=10282
- Chen, S. (2009) Analysis and trends of the health supplement industry in Taiwan. *Agricultural Biotechnology Industry Quarterly*, (18), 9-13.
- Chen, S. (2022). Multi-level marketing industry's total revenue surpassed 100 billion last year; Health Food is best-selling products. Retrieved from <https://money.udn.com/money/story/5612/6436954>
- Chen, Y., Chang, G., & Chiu, J. (2013). The study on the city consumption power of health food in Taiwan. *Journal of Data Analysis*, 5(8), 97-122.
- China Grain Products Research & Development Institute. (2022). Analysis of the 2020 domestic health and nutritional food industry's output value and industry overview. Achievements of the 2021 Ministry of Economic Affairs, Industrial Development Bureau's project to optimize and improve the quality of the health and nutritional food industry chain.
- Cooper, C. P. (Ed.). *Progress in tourism, recreation and hospitality management* (Vol. 3, pp. 78-105). London: Belhaven Press.
- Demby, E. (1973). *Psychographics and form where it comes lifestyle & psychographics*, W. D. Wells (Ed.). Chicago: AMA, p. 22.
- DiPietro, R. B., Gregory, S., & Jackson, A. (2013). Going green in quick-service restaurants: Customer perceptions and intentions. *International Journal of Hospitality & Tourism Administration*, 14(2), 139-156. <https://doi.org/10.1080/15256480.2013.782217>

- Engel, J. F., Blackwell, R. D., & Kollat, D. T. (1993). *Consumer behavior* (7th ed.). New York: Dryden Press.
- Francesco, Nicosia, M., & Prentice-Hall. (1966). Consumer decision processes: Marketing and advertising implications. Front Cover. *Consumer Behavior*, 284.
- Gilbert, D. C. (1991). An examination of the consumer decision process related to tourism.
- Howard, J. (1989). *Consumer behavior in marketing strategy*. Prentice-Hall International, Inc.
- Hsu, C. (2007). Overview of domestic and international health food regulatory systems. *Agricultural Biotechnology Industry Quarterly*, 11, 22-27.
- Kotler, P. (1997). *Marketing management: Analysis, planning, implementation and control*. NJ: Prentice Hall.
- Kotler, P. (2002). *Marketing places*. Simon and Schuster.
- Lin, H. (1994). *Comprehensive multi-level marketing guide*. Taipei: Formosan Magazine Press.
- Lin, Y. (2023). New Consumers and brands vie for entry. how to expand the over 160 billion RMB health food market?. Retrieved from <https://www.foodnext.net/issue/paper/5593793477>
- Schiffman, L. G., & Kanuk, L. (1991). *Consumer behavior* (2nd ed.). NJ: Prentice-Hall Press.
- Walters, C., & Gorden, P. W. (1970). *Consumer behaviors: An intergrated framework*. Homewood, Richard D. Irwin Inc.
- Wu, S. (1993). *The world of multi-level marketing*. Taipei: HanYu Publisher.
- Wu, T., Deng, Y., & Huang, H. (2018). A study on the influence of anti-counterfeiting packaging of health food on consumer purchase intention. *National Taiwan University of Arts Graphic Communication Arts Journal*, 4, 46-53.
- Wu, Y. (2021). Dietary supplements≠Healthy food. Nutritionist: What you should know before purchasing healthy food. *Nutrition to the Power of N*. Retrieved from <https://npower.heho.com.tw/archives/164359>

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