Iranian Journal of Fisheries Sciences 20(6) 1727-1739 2021
DOI: 10.22092/ijfs.2021.125467

Research Article

Factors affecting consumers and buyers' attitude toward fish and fishery products packaging in Tehran city

Reyhani Poul S.[1*]

Received: July 2021 Accepted: October 2021

Abstract

The purpose of this study was to investigate the factors affecting consumers and buyers' attitude toward fish and fishery products packaging in Tehran. For this purpose, after determining the research hypotheses, a questionnaire consisting of 60 questions was designed in two sections: demographic questions and main questions (Likert five-choice scale). The statistical population of the present study was the city of Tehran, in which 5 urban areas were randomly selected and 384 questionnaires (according to the ratio of household population in these areas) were completed. In order to investigate the acceptance or rejection of hypotheses, a conceptual model was designed and implemented using structural equation modeling (LISREL software). The results showed that three hypotheses of significant effect of the insertion of nutritional value (hypothesis 4), cooking (hypothesis 7) and storage methods (hypothesis 8) on fish and fishery products packaging on consumers and buyers' attitude toward packaging were rejected and five other hypotheses (significant effect of design and color, size and weight, shape and form, material and brand of packaging on consumers and buyers' attitude toward packaging) were confirmed. In this study, among the factors affecting consumers and buyers' attitude toward packaging, the highest effect (path) coefficient was related to the effect of design and color factor (0.29). Brand, size and weight, material and shape (and form) were ranked next with path coefficients of 0.24, 0.21, 0.15 and 0.11, respectively. According to the results, fish and fishery products packaging centers, in order to increase sales, should focus most of their activities on design and color, size and weight, material and shape of packaging.

Keywords: Fish, Fishery products, Packaging, Attitude

1-Department of Processing of Fishery Products, Faculty of Fisheries and Environment, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, Iran
[*]Corresponding author's Email: soheylreyhani@gmail.com

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

Introduction

With increase in the consumption of fish and fishery products over time, number of production and processing centers has also increased, so that people in all areas, especially offshore areas, have access to fish and fishery products. In order to increase sales, these centers must consider the needs, interests and tastes of the consumption community and produce products according to their wishes. This is a small part of the product marketing process. At higher levels, it is necessary to evaluate the buying and consuming behavior of the community to determine what factors can influence the decision to buy. In the country and international community, in various studies, the behavior of consumers of different foods, especially fish and sea foods, has been evaluated and remarkable results are presented (Ahamed, 2009; Thong and Olsen, 2012; Effendi *et al.*, 2015; Ghifarini *et al.*, 2018; Reyhani Poul *et al.*, 2019a).

These types of research are a combination of marketing sciences and food science. Therefore, in this type of research, the capacity of both fields should be used as much as possible. In marketing sciences, different theories are used to study the behavior of food consumers, among which the theory of planned behavior has a special place (Ajzen, 1991). This theory states that the purchasing decision process is influenced by three main elements, including attitude, norm, and perceived behavior control. Among these three element, consumer's attitude has a special place. Because in most studies, this element has played a special role in purchasing decisions (Verbeke and Vackier, 2005; Adibpour *et al.*, 2018; Reyhani Poul *et al.*, 2019a).

Attitude is defined as a person's response to a stimulus or object (Eagly and Chaiken, 1998). An attitude represents a set of relatively stable evaluations, reviews, feelings, and tendencies of a person in relation to a product or a line of thought. Attitude is generally defined as a person's positive or negative feelings about performing an action. In the case of food consumption, including fish and fishery products, the attitude refers to the sense (good feeling, feeling satisfied, etc.) that people have to buy and consume.
Numerous factors such as price, quality (Thong and Olsen, 2012), health knowledge (Effendi *et al.*, 2015) and packaging (Reyhani Poul *et al.*, 2019a) can affect consumers and buyer's attitude toward buying and consuming a type of food.

Packaging means the construction, installation and preparation of a container that maintains health of the product or its content in the period after production, and in transportation, storage and distribution stages, and prevents possible physical or chemical damage and hazards (Velasco *et al.*, 2014). Examining the history of packaging, it is clear that for a long time, this industry was only a protector of packaging content (product) and its cost was calculated from the cost of the product separately. Gradually, the role of packaging shifted toward informing

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

about product features. A little later, with the advancement of marketing science, it was tried to use this factor as an effective factor in product marketing and encouraging consumers to buy by promoting the design, color and role of packaging. This work was successful until today, such a way that the importance and position of packaging has become so prominent that some marketing experts consider this factor as one of the main elements of recovery (Cheskin, 1971).

In Tehran city, the consuming and buying of fish in packaged form is common (due to the distance from the sea). For this reason, protein foodstuffs supply centers and fish sales centers, supply fish fillets and shrimp and other fishery products in frozen and packaged forms. In particular, the supply of packaged fish in hypermarkets in the city is very common and citizens can buy these fishery products at different hours of the day and night. There are also centers that sell packaged fish online.

The purpose of this study was to identify factors affecting consumers and buyers' attitude toward fish and fishery products packaging. The results of the present study would be very useful and important for the managers of fish and shrimp processing and packaging centers. Because they can produce products according to the tastes and desires of the consumption society using this study's information.

Therefore, these studies will help in better marketing of fish and fishery products.

Research hypotheses

Packaging fish and fishery products, like packaging of other foodstuffs, have characteristics and feature that observance and non-observance, can change consumers and buyers' attitude toward packaging. These specifications and features include; design and color, size and weight, form and shape, nutritional value insertion, material, brand, cooking methods insertion, storage methods insertion, etc. Whether these factors affect consumers and buyers' attitude (toward packaging) or not, depends on the demographic characteristics of the statistical community of the study (gender, age, occupation, level of education, income, culture and eating habits), sampling location (distance and proximity to the sea), etc.

Therefore, the research hypotheses were designed as follows to determine whether in the statistical population of the present study, these variables affect the consumers and buyer's attitude (toward packaging) or not.

Hypothesis 1: The design and color of the packaging have a significant effect on consumers and buyers' attitude toward fish and fishery products packaging.

Hypothesis 2: The size and weight of the packaging have a significant effect on consumers and buyers' attitude toward fish and fishery products packaging.

Hypothesis 3: The shape and form of the packaging have a significant effect on consumers and buyers' attitude

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

toward fish and fishery products packaging.

Hypothesis 4: Nutritional value insertion on the packaging has a significant effect on consumers and buyers' attitude toward fish and fishery products packaging.

Hypothesis 5: Packaging material has a significant effect on consumers and buyers' attitude toward fish and fishery products packaging**.**

Hypothesis 6: Brand have a significant effect on consumers and buyers' attitude toward fishes and fishery products packaging**.**

Hypothesis 7: Providing recipes of cooking the product to the consumers and buyers, have a significant effect on their attitude toward fish and fishery products packaging.

Hypothesis 8: Providing guidance to consumers and buyers on how to store fish (shrimp and fishery products) has a significant effect on their attitude toward fish and fishery products packaging.

Hypothesis 9: Consumers and buyers' attitude toward packaging significantly affect the decision to buy.

Materials and methods

Questionnaire

In order to investigate the factors affecting consumers and buyers' attitude toward packaging, a questionnaire was designed that included 60 questions in two sections: demographic characteristics and main questions (Likert five-choice scale). Reliability of the questions in this questionnaire was determined by Cronbach's alpha method and was confirmed with a rate of 0.8. In order to check the validity of the questions, confirmatory factor analysis (LISREL software) was used and the results are presented in Table 1. According to the values of factor loadings and T, which were more than 0.3 and outside the range of -1.96 to 1.96 for questions, respectively, validity of the questions was confirmed. In order to complete this questionnaire, those who have referred to supply centers at least once to buy packaged fish and fishery products were used.

Statistical population and sample size

The statistical population of the present study was Tehran city. For sampling 5 urban areas of 1, 3, 6, 12 and 22 with a sample size of 384 people (based on Cochran's formula) were randomly selected for field study. The number of questionnaires in these areas was divided according to the ratio of household population to the total (Table 2).

Designing a conceptual model based on the hypotheses

Based on the research hypotheses, a model consisting of three categories of variables (independent latent, mediator and dependent latent) was designed, the diagram of which can be seen in Figure 1. The design and color, size and weight, shape and form, nutritional value insertion, material, brand, cooking methods insertion and storage methods insertion were among the independent latent variables of the

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

model. Consumers and buyers' attitude toward packaging constituted the mediating variable of the model. The dependent latent variable of the model was the decision to buy (purchasing intention).

Table 1: Confirmatory factor analysis.

Questions	Factor loading	T-value	Questions	Factor loading	T-value
Design and color			**Packaging material**		
Bright and attractive graphics	0.31	4.21	Only metal	0.74	10.25
Dark and commercial graphics	0.58	7.76	Metal with transparent cap	0.69	9.31
Warm and appetizing graphics	0.36	5.01	Transparent plastic	0.28	3.72
Size and weight			**Brand**		
250-500g	0.49	6.11	Old and famous	0.51	6.85
500-750g	0.34	4.52	New and famous	0.56	7.16
750-1000g	0.55	8.26	New	0.49	6.54
Shape and Form			**Inserting cooking methods**		
Cube	0.67	9.28	Diagram of cooking steps	0.86	11.07
Cylindrical	0.45	6.44	Explain the details	0.53	6.54
Closed dish	0.32	3.35	Unnecessary	0.61	7.11
Inserting nutritional value			**Attitude toward packaging**		
Inserting chemical omposition	0.42	5.27	Feeling satisfied	0.38	4.25
Inserting the benefits	0.29	3.36	Good feeling	0.63	6.19
Inserting the amount of alories	0.75	11.85	Very good feeling	0.47	4.84
Inserting storage methods			**Intention to purchasing**		
Before opening the package	0.44	6.43	Definitive purchase	0.28	3.92
After opening the package	0.39	5.52	Planning to purchasing	0.46	5.74
Shelf life	0.86	12.03	Probability of purchase	0.33	4.2

Table 2: Separation of questionnaires (number of samples) between 5 urban areas.

Urban area	Number of households	Percentage of total household population	Number of samples
1	169259	33.38	128
3	118801	23.43	90
6	84896	16.74	65
12	79105	15.6	59
22	54857	10.82	42
Total	506918	100	384

Statistical analysis

Structural equation modeling (LISREL software) was used to investigate the status of acceptance or rejection of hypotheses and also to evaluate the effect (path) coefficients between model elements. Hypotheses that the T-value for them were outside the range of -1.96 to 1.96 were confirmed, those otherwise, the hypotheses were rejected.

Results

Demographic characteristics

Table 3 shows demographic characteristics of the statistical population, including gender, age, level of education, household population and job composition. As can be seen in this table, a wide range of individuals (in terms of demographic characteristics) were used to complete the

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

questionnaire, which resulted in the validity and reliability of the findings.

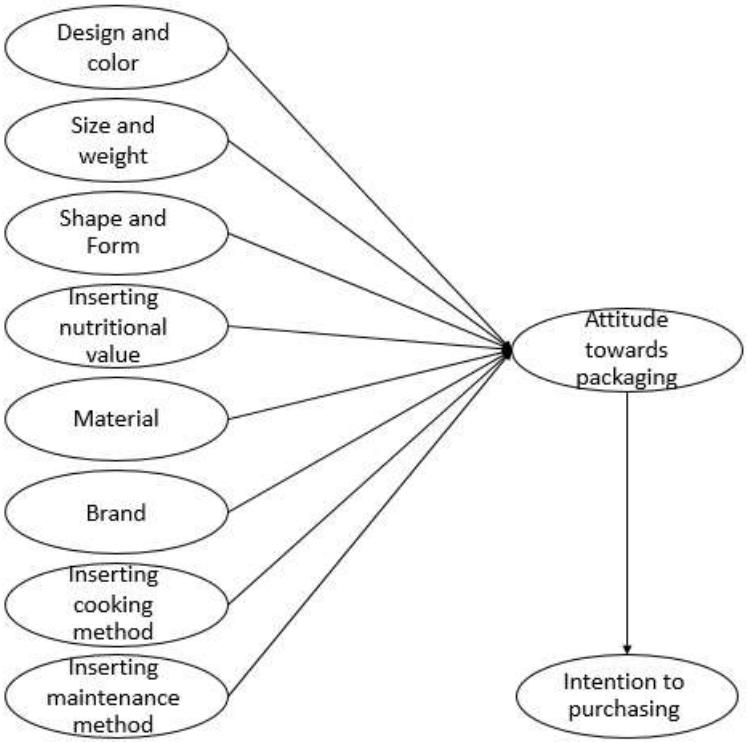

Figure 1: Research model.

Table 3: Demographic characteristics of the statistical population.

Demographic characteristics	Abundance (%)	Demographic characteristics	Abundance (%)
Gender		**Household population**	
Male	48.26	2	10.72
Female	51.74	3	20.84
Age		4	50.93
Less than 20 years	0.85	5 and more	16.87
20 to 35 years	26.11		
		Job	
35 to 50 years	59.44	Self employed	45.31
50 to 65 years	8.3	Employee	18.54
65 to 80 years	4.97	Student	20.16
		Unemployed	0.67
Education level			
Less than diploma	5.69	Retired	14.83
Diploma	22.84		
Post-diploma	14.38		
BSc	35.92		
MSc	19.75		
PhD	1.32		

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

Model implementation in standard and significant mode

Figure 2 shows the diagram of implementation of the research model in both standard and significant modes. Also, Table 4 presents the research hypotheses, effect coefficients between the model elements, T-values and acceptance or rejection status of the hypotheses. In Figure 2, numbers outside parentheses show the effect coefficients (implementation the model in standard mode) and numbers inside parentheses represent T-values (implementation of the model in significant mode). According to T-values, three hypotheses 4 (significant effect of nutritional value insertion on attitude toward packaging, with T-value=0.48), 7 (significant effect of inserting cooking methods on attitude toward packaging, with T-value=0.32) and 8 (significant effect of storage methods insertion on attitude toward packaging, with T-value=0.67) were rejected, but other hypotheses (1, 2, 3, 5, 6 and 9) were confirmed. According to Figure 2, the most effective factor on consumers and buyers' attitude toward packaging was design and color (with effect coefficient of 0.29, confirming hypothesis 1). Brand (with effect coefficient of 0.24), size and weight (with effect coefficient of 0.21), material (with effect coefficient of 0.15) and form (with effect coefficient of 0.11) of packaging were ranked next, respectively (confirming hypotheses 6, 2, 5 and 3, respectively). In this study, the consumers and buyers' attitude toward packaging had a significant effect on the decision to buy (with effect coefficient of 0.66, confirming hypothesis 9).

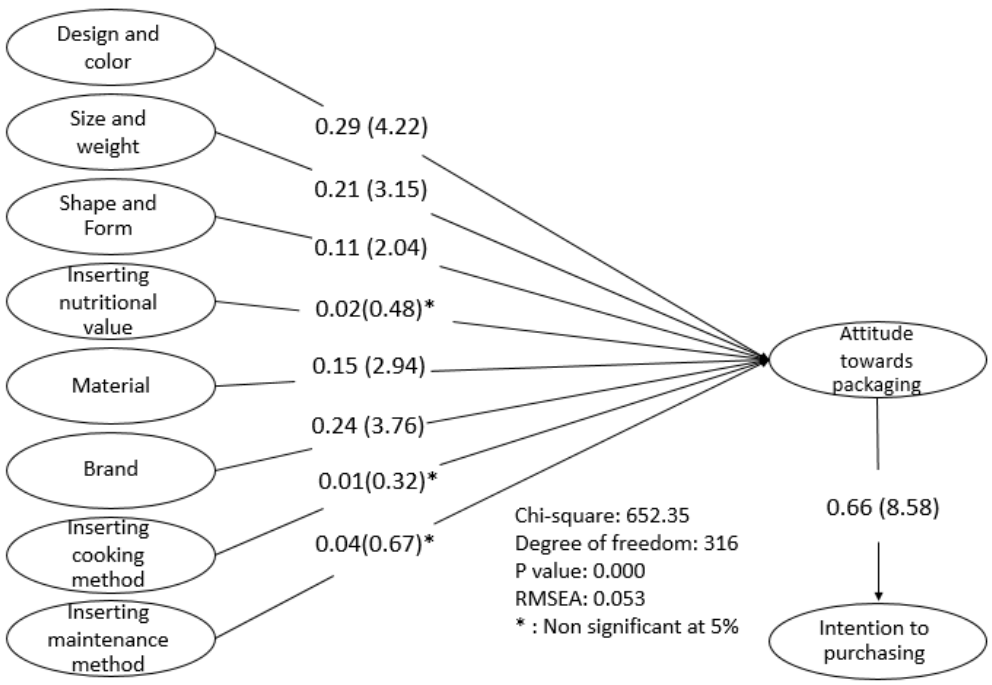

Figure 2: Effect coefficients and T-values between model structures (model execution in standard and significant mode).

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

Table 4: Status of confirmation or rejection of research hypotheses.

Number	Hypotheses	Effect coefficients	T-value	Status
1	Significant effect of design and color on attitude toward packaging	0.29	4.22	Confirmed
2	Significant effect of size and weight on attitude toward packaging	0.21	3.15	Confirmed
3	Significant effect of shape and form on attitude toward packaging	0.11	2.04	Confirmed
4	Significant effect of nutritional value insertion on attitude toward packaging	0.02	0.48	Rejected
5	Significant effect of packaging material on attitude toward packaging	0.15	2.94	Confirmed
6	Significant effect of brand on attitude toward packaging	0.24	3.76	Confirmed
7	Significant effect of inserting the cooking methods on attitude toward packaging	0.01	0.32	Rejected
8	Significant effect of insertion of storage methods on attitude toward packaging	0.04	0.67	Rejected
9	Significant effect of attitude toward packaging on the decision to buy	0.66	8.58	Confirmed

Goodness of Fit Index (GOFI) model

Table 5 shows fit indices of model. Given that the indicators are within acceptable limits, it can be claimed that the final pattern (model) had a good fit and the data and output of the statistical analysis were reliable.

Table 5: Research model fit indicators.

Fit Index	Result	The Fit Criteria	Model Evaluation
Chi-Square/Df	2.06	Chi-Square/Df ≤5	Good Fit
RMSEA	0.053	RMSEA ≤ 0.08	Good Fit
CFI	0.98	CFI ≥ 0.90	Good Fit
GFI	0.95	GFI ≥ 0.90	Good Fit
AGFI	0.91	AGFI ≥ 0.90	Good Fit
IFI	0.93	IFI ≥ 0.90	Good Fit
NFI	0.97	NFI≥ 0.90	Good Fit
NNFI	0.96	NNFI ≥ 0.90	Good Fit

Discussion

In this study, the three factors of nutritional value insertion, cooking methods insertion and storage methods insertion on packaging had no significant effect on consumers and buyers' attitude toward packaging. The statistical community probably had enough information about the nutritional value and cooking and storage methods of fish and fishery products, and insertion of these factors on the packaging did not affect attitude of buyers toward packaging (rejection of relevant hypotheses). In one study, paying attention to nutritional value insertion on shrimp packaging was one of the last priorities of the statistical society, and this indicates that the community does not pay much attention

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

to this factor (Reyhani Poul *et al.*, 2019b). In another study, the hypothesis of "people tend to buy products that more information is inserted on the packaging" was rejected (Esmaeilpour *et al.*, 2010). In the study of Sahafzadeh *et al.* (2016), unlike the present study, the variable of inserting product information on packaging had a significant effect on buyer's attitude toward packaging. Also in a study, consumers of packaged fish paid attention to inserting nutritional value and information about cooking and preserving the product on packaging (Adeli and Shabanpour, 2007). In study of Soltani *et al.* (2017), it was found that Sohan consumers in Qom city (Iran) pay attention to the information on the packaging and this factor affected their buying behavior. It was also reported that information about the nutrients of saffron (nutritional value insertion) had the greatest impact on consumer preferences (Dourandish *et al.*, 2017). Firoozian *et al.* (2009) stated that customers pay a lot of attention to the information on the package when buying a food item, and in fact this is the first factor that the buyer pays attention to when making the final decision to buy a food product. In general, attention of buyers and consumers to the information on packaging largely depends on demographic characteristics of the community and type of the product. A person may not pay attention to the information inserted on packaging of shrimp, but pay special attention to information inserted on packaging of other foods.

In this study, design and color with an effect coefficient of 0.29 was the most effective factor on consumers and buyers' attitude toward packaging. This result was consistent with the studies of Bahreyni *et al.* (2013) and Sharafi *et al.* (2018). This result points to the importance of packaging design and color factor on consumer and buyer' behavior. Package color is one of the important characteristics of packaging and is the first symbol that attracts attention of the consumer and buyer. Human influenceability from colors is completely psychological in nature and indirectly affects a person's reactions and behaviors. The color of the packaging stimulates the buyer's interest in the product and increases the purchasing power of the product (Semnarshad, 2015). Packaging design refers to attractiveness of the packaging and is related to the presence of designs, images, color combinations, signs, symbols and graphic drawings on the package. According to Rundh (2005), consumer attention is more focused on products with more attractive packaging. Therefore, in order to sell more and win in market competition, producers of fishery products must pay special attention to design and color of the packaging. Using experience of marketing and packaging, experts should choose design and color of the packaging for fishery products in a way that is liked by the people.

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

Based on the effect coefficients, the second factor influencing the consumers and buyers' attitude toward packaging was brand. It can be said that a famous brand is so important in selling a product and attracting customers' attention that sometimes the quality of food is hidden behind brand. This factor is an important tool in changing people's shopping behavior (Shehzad *et al.*, 2014). In the not-so-distant past, it was thought that only customer satisfaction with product quality would lead to customer loyalty. But today, marketing experts are realizing the importance of creating emotional brands. They have found that emotions and emotional communications to the brand can create a long-term bond between the customer and the brand. A research showed that the packaging shrimp brand (among other packaging specifications) is the first factor that the consumption community pays attention to when buying (Reyhani Poul *et al.*, 2019b). Therefore, in order to sell more, manufacturers must be careful in choosing the brand.

Size and weight (with effect coefficient of 0.21), material (with effect coefficient of 0.15) and shape and form (with effect coefficient of 0.11) of fishery products packaging were in next ranks of influence, respectively. Probably due to effect size and weight of packaging of fishery products on price, it may affect the consumers and buyers' attitude toward packaging. The first priority of people to buy packaged shrimp was 250 to 500 grams (Reyhani Poul *et al.*, 2019b). The choice of size of fishery products by the people depends on the household population, type of product and amount of income. The packaging material of fish and fishery products affects the consumers and buyers' attitude toward packaging, probably due to hygiene issues. The proper shape and form of packaging leads to attractiveness of the product and probably for this reason it affects consumers and buyers' attitude toward packaging. Figure 3 shows some examples of packaging forms and shapes for fish and fishery products.

Figure 3: Some examples of packaging forms for fish and fishery products.

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

In the present research model, the highest effect coefficient was related to the effect of the attitude toward packaging on the decision to purchase (0.66). This result showed that consumers and buyers' attitude toward packaging greatly influences the decision to buy fish and fishery products. Sahafzadeh *et al.* (2016) reached a similar conclusion. In their research, the effect of customers' attitude toward packaging on the mental conflict of their purchase was confirmed.

In order to increase sales, processing and packaging centers of fish and fishery products should focus most of their activities on design and color, brand, size and weight, material and shape of packaging. Because these factors affect consumers and buyers' attitude toward packaging and making decision to buy fish and fishery products.

References

Adeli, A. and Shabanpour, B., 2007. The role of packing aquatics on the consuming behavior of the families of Tehran city. *Journal of Agricultural Sciences and Natural Resources*, 14(**1**), 91-99, in Persian.

Adibpour, M., Ferdosi, Sh. and Moshabaki, A., 2018. Influencing factors in attitudes towards homogeneous brand extension, the case of: Shirin Asal Company. *Journal of Modern Marketing Research*, 1(**28**), 21-34, in Persian.

Ahamed, A.F.M.J., 2009. Consumer's attitude and consumption of fish in Dhaka city: Influence of perceived risk, trust and knowledge. Master Thesis, The Norwegian College of Fishery Science, University of Tromso, Norway and Nha Trang University, Vietnam: 92 P.

Ajzen, I., 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(**2**), 179-211. DOI:10.1016/0749-5978(91)90020-t.

Bahreyni, R., Bahreyni, V. and Farashbandi, R., 2013. Investigating the effect of product packaging quality on food consumer behavior from the perspective of customers in chain stores in Bushehr Province. *First National Conference on Accounting and Management*, Shiraz, Iran, in Persian.

Cheskin, L., 1971. Your package: Marketing success or disaster. *Package Engineering*, April: 16f-16g.

Dourandish, A., Tohidi, A. and Alizadeh, P., 2017. Ranking factors affecting the packing of saffron from the perspective of consumers. *Saffron Agronomy and Technology*, 5(**2**), 175-184, in Persian. DOI:10.22048/jsat.2016.54643.1165

Eagly, A.H. and Chaiken, S., 1998. *Attitude structure and function.* In: The Handbook of social psychology 4th edition, Vol. 1. Gilbert, D.T., Fiske, S.T and Lindzey, G., editors. McGraw-Hill, New York, USA: 269-322.

Effendi, I., Ginting, P., Lubis, A.N. and Fachrudin, K.A., 2015. Analysis of consumer behavior of

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

organic food in North Sumatra Province, Indonesia. *Journal of Business and Management*, 4(**1**), 44-58. DOI:10.12735/jbm.v4i1p44.

Esmaeilpour, H., Ghaffari, P. and Matinrad, A., 2010. Packaging and purchase decision (Case study: Food product packaging). *Journal of Industry and Entrepreneurship*, 51(**1**), 53-56, in Persian.

Firoozian, M., Hasangholipour, T. and Stiri, M., 2009. Investigating the effect of packaging factors on various processes of food consumers' behavior. *Journal of Business Management*, 1(**3**), 125-146, in Persian.

Ghifarini, A.F., Sumarwan, U. and Najib, M., 2018. Application of theory of planned behavior in shrimp consumer behavior analysis. *Independent Journal of Management and Production*, 9(**3**), 984-1001. DOI:10.14807/ijmp.v9i3.705.

Reyhani Poul, S., Alishahi, A., Adeli, A., Nargesian, A. and Ojaq, M., 2019a. Study and assessment of the behavior of shrimp consumers in Iran based on the theory of planned behavior. *Iranian Journal of Food Science and Technology*, 90(**16**), 65-77, in Persian. DOI:10.22092/ISFJ.2020.122578.

Reyhani Poul, S., Alishahi, A., Adeli, A., Nargesian, A. and Ojaq, M., 2019b. Study of behavior, priorities and barriers of shrimp consumers in Iran. *Iranian Scientific Fisheries Journal*, 28(6), 35-47, in Persian.

Rundh, B., 2005. The multi-faceted dimension of packaging: marketing logistic or marketing tool?. *British Food Journal*, 107(**9**), 670-684. DOI:10.1108/00070700510615053.

Sahafzadeh, A., Mansuri, F., Khodadadhoseini, H. and Kordnaeij, A., 2016. The impact of packaging dimensions on customer satisfaction and involvement with emphasis on the mediating role of attitudes towards packaging. *Journal of Food Science and Technology*, 59(**13**), 109-122, in Persian.

Semnarshad, S., 2015. The role and importance of color in the marketing mix in customer behavior with emphasis on the importance of color in packaging. Second National Conference on Marketing Research. Narkish Information Institute, Tehran, in Persian.

Sharafi, V., Aghaei, H. and Mohammadyari, Z., 2018. Investigating the effect of food packaging elements on parents' purchases. *Journal of Packaging Science and Technology*, 9(**33**), 34-49, in Persian.

Shehzad, U., Ahmad, S., Iqbal, K., Nawaz, M. and Usman, S., 2014. Influence of brand name on consumer choice and decision. *IOSR Journal of Business and Management (IOSR-JBM)*, 16(**6**), 72-76. DOI:10.9790/487X-16637276.

Soltani, M., Jafari, M. and Majidi, S., 2017. Identifying the elements of consumer buying decision and the impact of intellectual involvement on them (the case of Qom Sohan industry). *Journal of Food Science*

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]

and Technology, 72(14), 243-257, in Persian.

Thong, N.T. and Olsen, S.O., 2012. Attitude toward and consumption of fish in Vietnam. *Journal of Food Products Marketing*, 18(**2**), 79-95. DOI:10.1080/10454446.2012.653778.

Velasco, C., Salgado-Montejo, A., Marmolejo-Ramos, F. and Spence, C., 2014. Predictive packaging design: Tasting shapes, typefaces, names, and sounds. *Food Quality and Preference*, 34(**1**), 88-95. DOI:10.1016/j.foodqual.2013.12.005

Verbeke, W. and Vackier, I., 2005. Individual determinants of fish consumption: application of the theory of planned behaviour. *Appetite*, 44(**1**), 67-82. DOI:10.1016/j.appet.2004.08.006.

[Downloaded from jifro.ir on 2026-11-08]

[DOR: 20.1001.1.15622916.2021.20.6.13.2]