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# **PROCEEDING**

**INTERNATIONAL CONFERENCE  
INSTITUT KESEHATAN HELVETIA**

**“THE MULTIDICIPLANARY TEAM  
APPROACH & QUALITY OF CARE ”**

**MEDAN, 16 MAY 2023**

**PROCEEDINGS  
INTERNATIONAL CONFERENCE  
INSTITUT KESEHATAN HELVETIA**

**"THE MULTIDICIPLANARY TEAM APPROACH &  
QUALITY OF CARE**

**Medan, Indonesia, 16 May 2023**

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# **PROCEEDING INTERNATIONAL CONFERENCE INSTITUT KESEHATAN HELVETIA**

## **"THE MULTIDICIPLANARY TEAM APPROACH & QUALITY OF CARE"**

**Medan, Indonesia, 16 May 2023**

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**RUNDDOWN**  
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**"THE MULTIDICIPLANARY TEAM APPROACH & QUALITY OF CARE"**

**PLENO SESSION**

<b>WAKTU</b>	<b>ACTIVITY</b>	<b>DUR ATIO N</b>	<b>EXPLANATION</b>
07.30-07.45	Registration	30	Committee
08.00-08.10	Opening Ceremony	10	By MC : Dwi and Asrul
08.10-08.15	Doa	5	By : Mr. Haula S.Kom
08.15-08.20	Opening Video "5"	5	Committee
08.20-08.30	Indonesia Raya Song and Mars of IKH	10	Committee
08.30-08.40	Opening dance	10	Committee
08.40-09.10	Opening speech by Rector of IKH	30	Student of IKH
09.15-10.00	Asst. Prof. Dr. Yeliz CAKIR KOCAK : Department of Midwifery-Faculty of Health Sciences / Bartın University, Türkiye	45	Topic: Why does Pre-Perinatal and Postpartum Massages important?
10.00-10.45	Speaker Assoc Prof Dr. Hasni Arsad/ University Sains Malaysia	45	Topic : Anti Aging Using Herbal Plant Approach
10.45-11.30	Apt., Darwin Syamsul M.Si- Faculty of Pharmacy and Health- IKH	45	Topic : Safety Herbal Medicine for Modern Community
11.30-12.00	Discussion	30	Moderator and All Speakers
12.00-12.10	Giving souvenirs and e-Certificates to the speakers and Photo sessions	10	Committee and Rector of IKH
12.10-13.30	Break	30	Committee
13.30-14.15	Marta Tortosa Casbeer, LISW-CP- Pshycology Practice from America	45	Topic : How To Recognize Domestic Violence and Effective Treatment?

14.15-15.00	Dr. Yuzana Mohd Yusop/ University Sultan Zainal Abidin Terengganu	45	Topic : Mental Wellness (Changing Attitudes Towards the Importance of Happiness)
15.00-15.45	Professor Martin Dempster/Queen Belfast University London	45	Topic : Designing And Evaluating Interventions to Enhance Quality of Life and Modify Illness and Sick-Role Behaviours.
15.45- 16.15	Prof. Umar Zein- Department of Internal Medicine, Faculty of Medicine, Universitas Islam Sumatera Utara	45	Topic : A New Idea Of Hospital Concept in Indonesia
16.15-16.30	Discussion	30	Moderator and All Speakers
16.30-16.45	Giving souvenirs and e-Certificates to the speakers and Photo sessions	10	Committee and Rector of IKH
16.45 - Till End	Closing Ceremonial	10	MC

## PRESENTATION SESSION

WAKTU	PRESENTATOR	EXPLANATION
14.00-14.15	Opening	Committee
14.15 - 14.25	Mayang Wulan	Qualitative Methods: How Family Increases Self- Efficacy In Self-Care For Cervical Cancer Patients Undergoing Chemotherapy At The Adam Malik General Hospital In Medan?
14.25 - 14.35	Yopi Wulandhari	Long Relationship With Implant KB Using Changes In Acceptor's Body Weight At Sipayung Health Center
14.35 – 14.45	Rahmifitria	Health Education About Stunting For Parent Of Toddlers
14.55 - 15.05	Syahroni Damanik	Administration Of Water Cooked Red Betel Leaf In Reduce The Symptoms Of Fluor Albus In Women In Reproductive Age
15.15 – 15.25	Rika Fitri Ilvira	Consumer Interest In Omega-3 Eggs: A Health Perspective
15.25 – 15.35	Roni Gunawan	The Analysis Of Smoking Behavior In The Elderly In Dusun Viii Desa Pematang Setrak Serdang Bedagai



15.35 – 15.45	Anjeli Ratih Syamlingga Putri	The Influence Of Knowledge On Mask Compliance In The Covid-19 Pandemic
15.45 – 15.55	Julina Br Sembiring	Factors Affecting Low Birth Weight In Newborns In The Work Area Of The Binjai Estate Health Center
15.55 – 16.05	Nuriah Arma	The Effect Of Hypnobreastfeeding On Breastfeeding Anxiety In Primipara Postpartum Women In Stabat
16.05 – 16.15	Miskah Afriani	Knowledge, Attitude, And Role Of Teacher On Students' Behavior Of Smoking In Senior High School Amir Hamzah
16.15 – 16.25	Ramadhani Syafitri Nasution	The Effectiveness Of Honey Temulawak Extract With Reduce Mental Pain In Adolescent Women At Smk Negeri 13 Medan
16.25 – 16.35	Asrul	The Effect Of Health Worker Education In Anemia On The Third Trimester Of Pregnant Women, Karang Anyar Health Center At Kecamatan Beringin, Kabupaten Deli Serdang
16.35 – 16.45	Rahmawati Tarigan	Factors Related To Early Marriage In Kenangan Baru Tegal Sari Mandala Village
16.45 – 16.55	Arifah Devi Fitriani	The Effect Of Outpatient Service Quality On Patient Satisfaction In The Pandemic Era At Sundari Hospital

## CONSUMER INTEREST IN OMEGA-3 EGGS: A HEALTH PERSPECTIVE

Sri Sari Utami<sup>1</sup>, Rika Fitri Ilvira<sup>2\*</sup>

<sup>1</sup> Akademi Pertanian Yogyakarta, Yogyakarta, Indonesia

<sup>2</sup> Universitas Medan Area, Medan, Indonesia

**\*Corresponding author's e-mail: rikafitri@staff.uma.ac.id**

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### ABSTRACT

**Background:** The poultry industry has evolved in response to changing consumer preferences. Nowadays, consumers not only consume eggs to meet their food needs but also pay attention to the health aspects of food. The industry has responded to this shift in consumer behavior by offering various choices of chicken eggs in the market. Omega-3 eggs are one type of functional food that has gained popularity in Indonesia. These eggs are expected to meet the nutritional needs of the population while considering health aspects. Omega-3 eggs are beneficial for supporting the health of adult consumers and are also important for children's growth.

**Aims:** This study aims to examine the process of consumer adoption of omega-3 eggs from a health perspective.

**Methods:** This study involved 30 respondents who were selected using a purposive sampling method. The selected consumers were those who regularly purchase omega-3 eggs. This study consisted of primary and secondary data. The primary data were obtained through questionnaire surveys and were analyzed using SPSS through descriptive statistical methods.

**Results:** The majority of respondents were between 26-35 years old (50%), most of them had a bachelor's degree (53.3%), and the majority had an income range of IDR 2,000,000 - 5,000,000. In terms of taste, the majority of respondents agreed that omega-3 eggs tasted better (34%). Regarding nutrition, the majority of respondents agreed that omega-3 eggs were more nutritious and safer to consume. The decision to consume omega-3 eggs consists of several stages, including awareness, interest, evaluation, trial, and adoption. Each stage has varying consumer perspectives.

**Conclusion:** Omega-3 eggs are one type of functional food that is predominantly purchased by wives. The consumer perspective on consuming healthy food begins with an awareness of the importance of healthy food and eventually leads to the decision to adopt it.

**Keywords:** consumer interest, health perspective, omega-3

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*Host Conference : Institut Kesehatan Helvetia*

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### 1. Introduction

Eggs are the fourth highest commodity consumed by many people in Indonesia. The egg commodity is a source of nutrition that is easily available to the public at an affordable price. Data from the Badan Pusat Statistik (BPS) noted that the average per capita consumption value of broiler/village chicken eggs per month was 9.77 eggs in March 2021. Then it rose 2.16% to 9.98 eggs in one month in September 2021. It is special that in 2022 the average consumption of eggs by the population is 2,541 per capita per week (Badan Pusat Statistik, 2023).

Omega-3 eggs, a product of advancements in animal husbandry, possess a range of health advantages. The presence of omega-3 fatty acids in eggs is highly advantageous for metabolic processes and protects against degenerative ailments like cancer. Omega-3 eggs are particularly beneficial for the growth of fetuses and young children, contributing to the development of brain cells and potentially impacting children's intelligence levels. The nutritional content of omega eggs produced by BBPP Batu, Malang has been tested. The results show that the omega-3 content reaches 75%, 1549% protein, 4.97% fat, and 4.4% cholesterol compared to the cholesterol content in regular egg consumption (Sarjono, 2018). (Sarjono, 2018).

The demand for omega-3 eggs in the global market is influenced by several factors. One key driver is the increasing demand for food products that offer additional benefits, particularly those considered functional foods with enhanced health and nutritional advantages. Developing economies are anticipated to experience a strong growth rate in the demand for omega-3-based products, including omega-3 eggs and other enriched functional food items. This demand surge can be attributed to the rise in chronic diseases, health concerns, and the prevalence of omega-3 deficiency in certain countries. Omega-3 fatty acids are crucial for human health, and the demand for omega-3 eggs is growing due to their cardiovascular benefits. For instance, consuming omega-3 eggs can help reduce blood pressure, promote heart health, and decrease the risk of heart attacks and blood clots.

The consumption of organically derived food products with high nutritional content is gaining popularity. Omega-3 eggs are rich in nutrients, and egg producers follow organic practices during their production. Eggs from hens raised in free-range environments without antibiotics or growth hormones fed a vegetarian diet with a higher quantity of flax seeds, offer greater nutritional value. Consumers are drawn to these eggs due to their health benefits, including their omega-3 enrichment. These factors are particularly appealing to individuals seeking a healthy lifestyle and aiming to prevent heart health issues, high blood pressure, and other related problems (Anonim, 2017).

In recent years, the egg industry has experienced various food safety issues that have raised concerns among consumers. Examples include the salmonella outbreak in the US in 2015 (Li, Bernard, Johnston, Messer, & Kaiser, 2017) and the contamination of eggs with Fipronil pesticide in Europe in 2017 (Li et al., 2019). These incidents have impacted consumer preferences and consumption patterns due to worries about the safety of eggs. Additionally, there has been a rise in health conditions related to egg nutrition, such as allergies (Loh & Tang, 2018) and high cholesterol (McNamara, 2015), further influencing consumer choices.

One significant trend in recent years has been the increased demand for omega-3-enriched functional foods. Consumers now have more dietary options, including omega-3-enriched eggs, milk, and bread products (Jacobsen, 2010). These challenges and issues are compounded by the growing and complex consumer demand for healthy and sustainable food products (Grunert, Hieke, & Wills, 2014). When it comes to eggs, factors like size and shell color play a crucial role in influencing consumer behavior, perceptions, and preferences.

Research suggests that consumer acceptance of functional foods is primarily driven by perceived connections between factors such as diet and health (Annunziata & Vecchio, 2010) and sensory attributes like taste, pleasure, and convenience of use (Topolska, Florkiewicz, & Filipiak-Florkiewicz, 2021). Both the taste and health aspects of functional food are considered essential criteria in purchase decisions (Kolbina & Voroshilin, 2020). Studies have highlighted the importance of taste and smell as attributes that provide additional benefits to consumers (Williams et al., 2005), along with consumer awareness and the enjoyment derived from functional products (Çakiroğlu & Uçar, 2018). To arrive at a consumer decision, several decision processes as conveyed by Bahlen in Bahlen's Adoption theory, state that 5 stages must be passed by a person before finally deciding to adopt an innovation, in this case, the decision to consume omega-3 eggs is awareness, interest, evaluate, try/trial and adoption. Therefore, this research will examine the process of consumer adoption of omega-3 eggs from a health perspective. Consumer

interest in omega-3 eggs in Indonesia has the opportunity to increase because of the health perspective that is considered for adult consumers as well as children. However, this needs to be supported by research data. This research is expected to be able to provide additional studies in the field of marketing, especially consumer interest in omega-3 eggs.

## 2. Methods

The research method was carried out using a qualitative descriptive approach, with a sample of omega-3 egg buyers in the city of Yogyakarta. The sampling technique is purposive sampling. In this method, sampling is done randomly where the sample group is targeted to have certain attributes, namely consumers who buy omega-3 eggs. Researchers can choose an accurate and cost-effective sample by selecting people or points based on what criteria they want to know. The type of research data is primary data and comes from filling out a questionnaire of 30 consumers of omega-3 eggs in a supermarket in the Yogyakarta area. The data collection technique was carried out by giving questionnaires to respondents in the form of statements with a Likert scale of 1-5, number 1 indicates strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. The data was then processed using the SPSS program using descriptive statistical methods.

## 3. Results

### *Respondent characteristics*

Demographic characteristics of respondents by age group, last education, and income can be seen in Table 1.

Table 1. Demographic characteristics

Respondent Characteristics	Numbers	Percentage
<b>Age (years old)</b>		
26 - 35	14	46,7
36 - 45	15	50,0
46 - 55	1	3,3
<b>Education</b>		
Senior high school	9	30,00
Diploma	4	13,33
Graduate	16	53,33
Postgraduate	1	3,33
<b>Income</b>		
< IDR 2.000.000	2	6,67
IDR 2.000.000 -IDR 5.000.000	25	83,33
IDR5.000.001-IDR 10.000.000	1	3,33
More than IDR 10.000.000	2	6,67

*Source: Primary data, 2023*

The majority of respondents were aged between 36-45 years (50%), last education was dominated by graduates (53.33%). The income of the majority of consumers (83.33%) is between IDR 2,000,000 – IDR 5,000,000.

### ***Descriptive statistics***

Responses to statements of taste and higher nutritional content in omega-3 eggs compared to non-omega-3 chicken eggs can be seen in Figures 1 and 2.

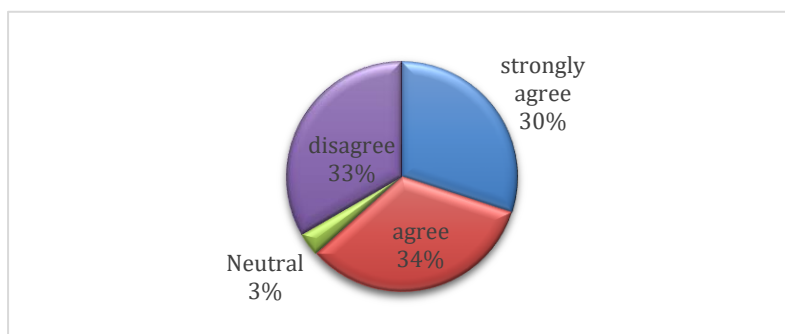


Figure 1. Omega 3 eggs have a better taste than non-omega 3 eggs

Figure 1 shows that in terms of taste, 34 % of respondents agree that omega-3 eggs have better taste than non-omega-3 eggs, 30% state that they strongly agree, 3% are neutral and 33% disagree with that.

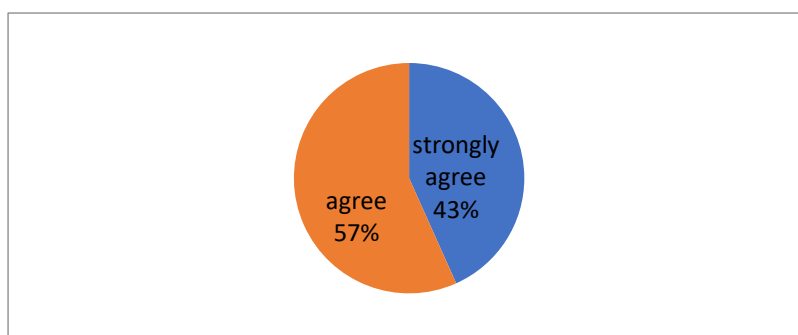


Figure 2. Omega 3 eggs have better nutrition than non-omega 3

Omega-3 eggs are believed to have various benefits that are good for health. The nutritional content of omega-3 eggs is higher than that of purebred chicken eggs (57 % agreed). It is further known that consumers state that the cholesterol content in omega-3 eggs is lower and does not cause allergies.

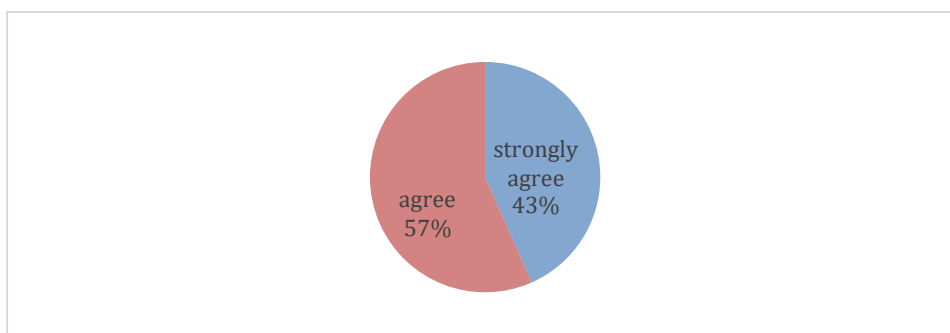


Figure 3. Omega 3 eggs are safer to consume than non-omega 3

Viewed from the aspect of food safety (Figure 3), omega-3 eggs are produced in a controlled process and meet various food safety requirements which are generally listed on the sales packaging. The majority of

respondents (57%) agree that omega-3 chicken eggs are safer for consumption.

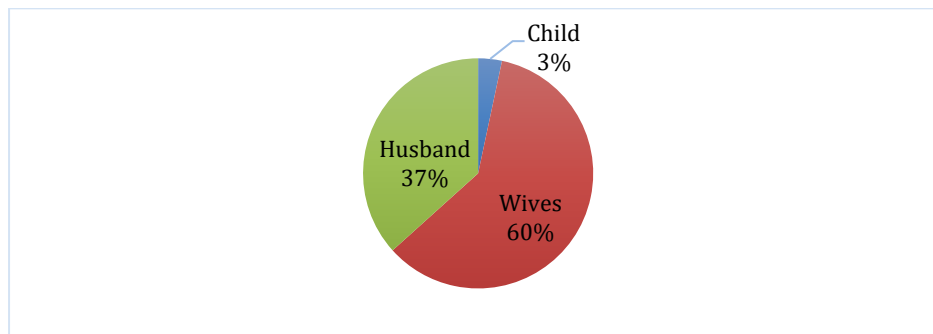


Figure 4. Omega-3 egg purchasing decision-makers

Figure 4 shows that 60% wife make purchasing decisions for omega-3 eggs. This shows that wives/mothers have a great influence in managing the fulfillment of food needs for their family members. The decision to purchase food is of course based on the purchasing power of a household and the level of knowledge of mothers who wish to consume healthy food for their family members. Mothers certainly have to be selective in purchasing decisions for products including labeled chicken eggs. The price paid is expected to be proportional to the benefits obtained

#### A Health Perspective from Consumers of Omega-3 Eggs

Consumer perspective on omega-3 eggs in Yogyakarta is seen in the adoption approach of Bahlen's theory. The person will be in the awareness stage first and then interested, evaluate, try, and adopt. The results of the tabulation of data from 30 respondents are seen in Table 2.

Table 2. The average consumer perspective on omega-3 eggs in the city of Yogyakarta is seen in the adoption of Bahlen's theory

Statement	Average	Adoption Stages
Consuming omega-3 eggs is a form of prestige/high social class	2,00	Awareness
Omega-3 chicken eggs are safer to consume.	4,50	Awareness
I read articles related to healthy foods.	3,94	Interest
I read the food safety description on the package of omega-3 eggs.	4,00	Interest
I paid attention to the nutritional information on the omega-3 egg packaging.	4,06	Interest
Omega-3 chicken eggs are more nutritious than non-omega-3 chicken eggs.	4,34	Evaluate
Omega-3 eggs are more hygienic than non-omega-3 chicken eggs.	4,22	Evaluate
Antibiotic residues in omega-3 eggs are less compared to non-omega-3 chicken eggs.	4,34	Evaluate
Omega-3 chicken eggs are safer to eat because they are free of Salmonella bacteria.	4,53	Evaluate
I bought omega-3 eggs because they taste better than non-omega-3 chicken eggs.	3,72	Try
I bought omega-3 eggs because the nutritional content is higher than non-omega-3 chicken eggs.	4,28	Try
I consume omega-3 eggs to keep up with the growing trend.	1,75	Adopt
I suggest to others to follow a healthy lifestyle.	3,84	Adopt

---

**Source: Primary data, 2023**

Based on Bahlen's theory, the awareness stage is a process when consumers already know the information on omega-3 egg products. At this stage, respondents realized that consuming omega-3 eggs is a form of prestige/high social class and is safer. Respondents showed interest in omega-3 egg products by reading articles and safety information on consuming omega-3 eggs by reading and paying attention to the nutritional information on omega-3 egg packaging. Furthermore, respondents began to assess and compare omega-3 eggs with non-omega-3 eggs. Such as comparing nutritional value, hygiene, antibiotic residues, adding hormones during production activities, and the safety of Salmonella bacteria. In the next process, respondents decided to try omega-3 eggs because they taste better and contain higher nutritional value than non-omega-3 eggs. Finally decided to adopt consuming omega-3 eggs because it follows the growing trend, follows the trend, and recommends it to others as a way to live a healthy lifestyle and maintain health.

#### **4. Discussion**

Functional food is a typical and simple definition of processed foods having disease-preventing and/or health-promoting benefits in addition to their nutritive value (Arihara, 2014). Based on the definition, eggs with omega-3 can be categorized as a functional food. Consumers' age and gender have an impact on how functional foods are consumed. Functional meals tend to be more appealing to women, but different items can appeal to either gender. Healthy eating has been linked to education, and those who consume functional foods tend to be more educated than those who don't (Tur & Bibiloni, 2015). This statement is in line with the results of a study which showed that the majority age group of omega-3 egg consumers was in the age group of 36-45 years with a bachelor's degree and an income of IDR. 2,000,000 - IDR 5,000,000.

Physically, the part that distinguishes regular eggs from omega-3 eggs is that the yolk of omega-3 is slightly reddish while the yolk of regular eggs is yellow (Muzami, Nurhayati, & Martono, 2016). According to Alagawany et al., (2019), Omega-3 and omega-6 contain essential fatty acids. They are necessary for human health and regular physiological functions. Due to the absence of some desaturases, not all fatty acids can be synthesized endogenously. Therefore, consumption of omega-3 eggs can fulfill human needs for essential fatty acids which cannot be fulfilled independently by the body.

Research conducted by Demirel, Yüksel-Bilsel, & Şahin-Yeşilçubuk, (2021) shows that omega-3 fatty acids are useful for health. The most common response was decreasing heart attack risk (31%). Overall, 24% of the respondents were aware of the advantages of omega-3 fatty acids for the immune system, and 20% were aware of the advantages for women during pregnancy and the growth of the baby's brain and eyes. In addition, 13% of participants knew that omega-3 fatty acids could reduce hypertension,



and 12% knew that they could be used to treat depression and behavioral disorders. Diets rich in omega-3 fatty acids are essential for maintaining human health and preventing disease. To benefit from the health impacts of these dietary lipids and to improve public health, consumer education is crucial. Additionally, from a marketing standpoint, it's critical to understand how well-informed consumers are regarding omega-3 fatty acids.

The decision to consume eggs with omega-3 based on the results of this study is mostly made by women who act as wives/mothers. The role of women as mothers who are in charge of managing the family's food menu. Eggs with omega-3 can maintain the health of all family members. To decide to buy or consume, respondents carried out several stages, starting from being aware of the importance of health, then showing interest by seeking information about the advantages of eggs with omega-3 then assessing and comparing with non-omega-3 eggs, and finally trying and adopting to consume eggs with omega-3, according to the adoption stage theory introduced by Bahlen. This is in line with research by Bröring, (2010) which states that the factors affecting the market for functional foods can be distinguished based on the consumer, market, and product features.

## 5. Conclusion

The conclusion of this study is the decision to buy, or consume, respondents carried out several stages, starting from being aware of the importance of health, then showing interest by seeking information about the advantages of eggs with omega-3 then assessing and comparing with non-omega-3 eggs, and finally try and adopt to consume eggs with omega-3, according to the theory of adoption stages introduced by Bahlen.

Eggs are a source of protein and are included in the functional food group. Consumption of omega-3 eggs for children besides meeting the need for protein will also meet the need for essential fatty acids at a growing age. So, it needs to be recommended for parents with children at a growing age to consume eggs with omega-3. The development of consumer research needs to be continuously developed to anticipate changes in consumer behavior. Education about the benefits of omega-3 eggs is needed to increase the consumption of animal protein in Indonesia. Future research may include an analysis of the level of knowledge and urgency of healthy food and environmental issues related to the healthy food production process.

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