Analysis Of Factors Affecting The Use Of FAM Behavior (Food Additional Material) In Food Traders Group In The Environment Ponorogo All District Market South Region

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ABSTRACT

Keywords :

Food Additives,

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Food Additives (FA) or often called Food Additional Material (FAM) are ingredients added to food to influence the nature or shape of food. Addition of additives to food has a certain dose because food additives can cause health hazards. The purpose of this study was to determine the analysis of factors that influence the behavior of using FAM in the food traders group in the market area of the South Region Ponorogo Regency.

This research is an observational analytic study. The population of this research is all traders in the market environment of the South Region Ponorogo Regency. The sampling technique used is Stratified Random Sampling. Samples taken were 105 respondents. The independent variable is knowledge and attitude, the dependent variable is the behavior of traders. Data is collected by questionnaire instruments and processed using editing, coding, scoring and tabulating then statistical tests using logistic regression test data analysis with $\alpha = 0.05$. From the ordinal regression statistical test, the p-value value in the knowledge factor $p = 0.005 < 0.05$, on the attitude factor $p = 0.000 < 0.05$. The magnitude of influence is indicated by the value of Estimate. Knowledge variable with 2.743, while attitude variable with estimate value 26.911. Based on the results of the estimate value or the magnitude of the largest or dominant influence lies in the attitude variable with an estimated value of 26.911. So it can be concluded that the most dominant factor influencing behavior is an attitude factor with an effect of 26,911 times. In the use of food additives for the processing of food to be sold it must be appropriate and correct according to the applicable dosages and conditions.

BACKGROUND

Food Additives (FA) or often called Food Additional Material (FAM) are ingredients that are added to food to influence the nature or shape of food. Addition of additives to food has a certain dose because food additives can cause health hazards.

The use of FAM in snacks needs to be watched out, both by producers and by consumers. Deviations in the use of FAM can be dangerous. This act must be prevented & acted decisively by the government which has an obligation to protect its people from the use of FAM that is not in accordance with the regulations. The problematic snacks contain borax, formalin, illegal preservatives, textile coloring agents, excessive amounts of artificial flavorings & sweeteners, also use salt that is not iodized. Because of this, we need foods that are safe for consumption, quality, and nutritious. Food security policy & national nutrition development are part of national food policy including the use of food additives.

From the literature, it can be recognized that there are various factors that influence the use of hazardous dyes, namely ignorance of the public, cheap coloring prices, ease of obtaining, good color and high temperature resistance (Herawati, 2014). 86.36%) knew about dangerous synthetic dyes. The

results of the bivariate statistical tests indicate that there is an influence of knowledge with the use of dangerous synthetic dyes. One of the factors that determine a person's behavior is knowledge. Glauz, et al. (2014) stated that knowledge is a very important domain in the cessation of one's actions.

Based on the results of a preliminary study in the Balong market, Kab. Ponorogo, from the interviews of 16 market hawker traders, stated that in making food that is taxed using FAM (Food Additives) such as developer ingredients, dyes, borax, and artificial sweeteners. The knowledge of traders in the market about the use of dangerous synthetic dyes is motivated by several factors including the level of education. Educational levels vary from no school to high school. With the varying level of education that is owned, it creates a different understanding for each individual. With these conditions the level of education makes it easier for respondents to receive information. In addition, education areas are located in urban areas, making it easier to access information about food coloring for someone who has more information sources who will have wider knowledge in this study, only 90% of respondents get information on harmful dyes from print media.

However, 48% do not know the characteristics of foods that use dangerous dyes. Logically the knowledge that someone has will determine their attitudes and actions. This is in accordance with the results of the study. The attitude of traders who do not agree with the use of synthetic dyes is dangerous followed by positive actions, namely not using dangerous synthetic dyes. According to Koentjaraningrat attitude is a predisposition or mental state in the soul and the individual self to react to their environment.

Research Purposes

To find out the analysis of factors that influence the behavior of using FAM (Food Additives) in the food merchant group in the market area of the South Region Ponorogo Regency.

RESEARCH METHODS

This research is an observational analytic study. The population of this research is all traders in the market environment of the South Region Ponorogo Regency. The sampling technique used is Stratified Random Sampling. Samples taken were 105 respondents. The independent variable is knowledge and attitude, the dependent variable is the behavior of traders. Data is collected by questionnaire instruments and processed using editing, coding, scoring and tabulating then statistical tests using logistic regression test data analysis with $\alpha = 0.05$.

RESULTS
Subject Characteristics
Table 1. Characteristics of respondents in this study include age, education, selling time, knowledge, attitude and behavior.

No	Characteristics	ΣN	Σ%
1	**Age (year)**		
	20-35	11	10,5
	>35	94	89,5
2	**Education**		
	No school	2	1,9
	Elementary school	64	61
	Junior high school	19	18,1
	High school	18	18,1
	College	2	1,9
3	**Selling time (year)**		
	<10	30	28,6
	10-35	68	64,8
	>35	7	6,7
4	**Knowledge**		
	Well	10	9,5
	Enough	56	53,3
	Less	39	37,2
5	**Attitude**		

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	Well	8	7,8
	Enough	71	67,6
	Less	26	24,8
6	**Behavior**		
	Well	37	35,2
	Enough	48	45,7
	Bad	20	19,1
	Total	**105**	**100**

STATISTICAL TEST RESULTS

Tabel 2. Statistical Test Results Dominant Influence of Knowledge and Attitudes toward Behavior in Food Trader Groups in the Market Area of the South Region Ponorogo Regency

Parameter Estimates

							95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Y = 1,00]	7,615	1,331	32,752	1	,000	10,223	5,007
	[Y = 2,00]	2,306	,642	12,919	1	,000	3,563	1,048
Location	[X1=1,00]	2,743	,979	7,842	1	,005	4,662	,823
	[X1=2,00]	1,902	,561	11,512	1	,001	3,001	,803
	[X1=3,00]	0ª	.	.	0	.	.	.
	[X2=1,00]	26,911	,000	.	1	.	26,911	26,911
	[X2=2,00]	5,791	1,156	25,103	1	,000	8,057	3,526
	[X2=3,00]	0ª	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

From the ordinal regression statistical test, the p-value value in the knowledge factor p = 0.005 <0.05, on the attitude factor p = 0.000 <0.05. The magnitude of influence is indicated by the value of Estimate. X1 variable (knowledge) with 2.743, while X2 variable (attitude) with an estimate value of 26.911. Based on the results of the estimate value or the magnitude of the largest or dominant influence lies in the X2 variable (attitude) with an estimated value of 26.911. So it can be concluded that the most dominant factor affecting Y (behavior) is factor X2 (attitude) with an effect of 26,911 times.

DISCUSSION

Knowledge of the Use of FAM (Food Additives) in the Food Trader Group in the Market Area in the South Ponorogo Regency

From the results of the study it is known that the knowledge of traders about the use of food additives, most of the respondents were knowledgeable enough, as many as 56 people (53.3%) out of a total of 105 respondents.

Knowledge is the result of knowing, which occurs after people perceive certain objects. Sensing occurs through the human senses, namely the senses of sight, hearing, smell, taste, and touch. Most knowledge is obtained from the eyes and ears. Knowledge is a guideline in shaping one's actions (Notoatmodjo, 2014).

Based on the cross tabulation between the characteristics of the age respondents with the knowledge variable, it was found that most traders aged> 35 years had sufficient knowledge about Food Additives as many as 52 respondents or as much as 49.5%. Based on the test using the Spearman rho test obtained a value of 0.079 with p value of 0.424> α = 0.05 because α> 0.05, it can be concluded that there is no relationship between age and the knowledge of traders about Food Additives. in the Market Area of the South Region Ponorogo Regency.

Based on the cross tabulation between the characteristics of educational respondents and the knowledge variable, it was found that most traders who had elementary education had less knowledge about Food Additives as many as 35 respondents or as much as 33.3%. Based on the test using the Spearman RHO test obtained a value of 0.569 with p value of 0.000 <α = 0.05. Because α <0.05, it

can be concluded that there is a relationship between education and the knowledge of traders about Food Additives. in the Market Area of the South Region Ponorogo Regency.

Based on cross tabulation between knowledge variables with behavioral variables, it was found that most traders with sufficient knowledge of good behavior about Food Additives were 25 respondents or 23.8%. Based on the test using ordinal regression test obtained a value of 2.742 with p value of $0.005 < \alpha = 0.05$ because $\alpha < 0.05$, it can be concluded that there is an influence between knowledge and behavior of traders about Food Additives. in the Market Area of the South Region Ponorogo Regency.

Based on the facts of the research results, it is known that almost all traders have knowledge in sufficient categories about the use of food additives, this is due to the lack of information about the use of food additives appropriately and correctly. Traders need to know in advance the scope of the use of food additives. Food traders, food managers should have good knowledge. Because good knowledge will affect the health. The wrong use of Food Additives is due to ignorance of Food Additives, so that consumer behavior is not good and creates consumer health problems, therefore the role of health workers is very much needed to conduct health education about the use of food additives to increase traders' knowledge about use food additives appropriately and correctly.

Attitude of Use of FAM (Food Additives) in the Food Traders Group in the Market Area of the South Ponorogo Regency

From the results of the study it was known that the attitude of traders about the use of food additives, most of the respondents in the category were sufficient, as many as 71 people (67.6%) out of a total of 105 respondents.

Attitude is a view or feeling accompanied by a tendency to act according to the object (Purwanto, H). Attitude is a mental and nerve state of readiness that is regulated through experience that provides a dynamic influence or directed towards the individual response to all objects and situations associated with it. (Widayatun, T.R, 2013).

Attitude is a reaction or attitude that is still closed from someone to a stimulus or object. Manifestations of attitudes cannot be seen directly, but can only be interpreted in advance of closed behavior. The attitude clearly shows the connotation of the suitability of the reaction to a particular stimulus which in everyday life is an emotional reaction to social stimulus. Attitude is an assessment or can be a person's opinion of a stimulus or object (the object in this case is a health problem, including disease) (Azwar, 2015).

Based on the cross tabulation between the age characteristics of the respondents and attitudinal variables, it was found that the majority of traders aged> 35 years had enough attitudes about Food Additives as many as 66 respondents or as much as 62.9%. Based on the test using the Spearman RHO test obtained a value of 0.020 with p value of $0.840 > \alpha = 0.05$ because $\alpha > 0.05$, it can be concluded that there is no relationship between the age of traders and traders' attitudes about Food Additives. in the Market Area of the South Region Ponorogo Regency.

Based on the cross tabulation between attitude variables and behavioral variables, it was found that most traders with fairly good attitudes had good behavior about Food Additives as many as 43 respondents or as much as 41%. Based on the test using the Spearman RHO test obtained a value of 26.911 with p value of $0.000 < \alpha = 0.05$ because $\alpha < 0.05$, it can be concluded that there is an influence between attitudes and behavior of traders about Food Additives. in the Market Area of the South Region Ponorogo Regency.

Based on cross tabulation between the characteristics of education respondents and attitudinal variables, it was found that most traders who had elementary education had sufficient attitudes about Food Additives as much as 40 respondents or as much as 38.1%. Based on the test using the Spearman RHO test obtained a value of 0.526 with p value of $0.000 < \alpha = 0.05$ because $\alpha < 0.05$, it can be concluded that there is a relationship between education and the attitude of traders about Food Additives. in the Market Area of the South Region Ponorogo Regency.

Based on the cross tabulation between the characteristics of the old respondent in trading and the attitude variable, it was found that the majority of traders who traded for 10-35 years had enough attitudes about Food Additives as many as 47 respondents or as much as 44.8%. Based on the test using the Spearman RHO test obtained a value of 0.221 with p value of $0.024 < \alpha = 0.05$ because α

<0.05, it can be concluded that there is a relationship between the duration of trading and the attitude of traders about Food Additives. in the Market Area of the South Region Ponorogo Regency.

The results of the statistical test obtained the Pseudo R-Square value in Nagelkerke of 0.709, which means that knowledge and attitudes influence the behavior of food traders who use FAM (Food Additives) in the food traders group in the market area of South Ponorogo Regency at 70.9% and the rest affected other factors of 29.1%.

Based on the fact the results of the study can be seen that the attitude of food traders in the use of food additives in the category of food, this is due to the lack of knowledge of traders about food additives, besides that there are still many traders who still follow the old ways or old habits they use in adding food additives. This, if allowed to continue, will have an impact on the health of consumers who consume snacks they sell, therefore the role of health workers is needed to disseminate food additives, so that traders can change the behavior of adding food ingredients to the snacks they sell.

Behavior of Use of FAM (Food Additives) in the Food Traders Group in the Market Area in the South Ponorogo Regency

From the results of the study it was known that the behavior of food traders in the use of food additives, most of the respondents behaved adequately as many as 48 people (45.7%) out of a total of 105 respondents.

According to Notoadmodjo (2014) in terms of biology, behavior is an activity or activity of an organism (living thing) concerned. In other words, human behavior is all activities or human activities that can be observed directly such as talking, walking, laughing, etc., or which cannot be observed by outsiders such as thinking, fantasizing, and so on. Skinner in Notoadmodjo (2014) formulated that behavior is the response or reaction of a person to stimulus (external stimulation).

Logically the knowledge possessed by someone will determine their attitudes and actions. This is in accordance with the results of the study. The attitude of traders who do not agree with the use of synthetic dyes is dangerous followed by positive actions, namely not using dangerous synthetic dyes. Attitude is a predisposition or mental state in the individual's soul and self to react to their environment. According to Sugyatmi, education is basically a conscious effort to develop the personality and abilities of students.

Based on the cross tabulation between the characteristics of the old respondents trading with the behavioral variables, it was found that the majority of traders who had long trades of 10-35 years had sufficient behavior regarding Food Additives as many as 33 respondents or as many as 31.4%. Based on the test using the Spearman RHO test obtained a value of 0.247 with p value of 0.011 $<\alpha = 0.05$ because $\alpha <0.05$, it can be concluded that there is a relationship between the length of trading with traders' behavior regarding Food Additives. in the Market Area of the South Region Ponorogo Regency.

Based on the cross tabulation between the independent variables and the dependent variable, the data obtained are 10 respondents who have good knowledge, most of whom have good behavior as much as 8 respondents (7.6%), 56 respondents who have sufficient knowledge, most have good behavior, 25 respondents (23 , 8%). In 36 respondents who had less knowledge, most had sufficient behavior as many as 23 respondents (21.9%).

Based on cross tabulation, respondents who have good attitude have good behavior as much as 8 respondents (7.6%), 71 respondents who have attitudes in enough categories, most of them have sufficient behavior as many as 43 respondents (41%). In 26 respondents who had attitudes in the less category most had bad behavior as many as 20 respondents (19%).

The results of statistical tests on the behavior of food traders who use FAM (Food Additives) in the food traders group in the market area of the South Region Ponorogo Regency use a degree of error of 0.05 resulting in a p value of 0,000. If p value <degree of error then H1 is accepted and Ho is rejected or there is influence of knowledge and attitudes towards the behavior of food traders who use FAM (Food Additives) in the food merchant group in the market area of the South Ponorogo Regency.

Based on the facts of the study, it can be seen that the behavior of using food additives in the category is sufficient, this is due to the lack of knowledge of traders about food additives, besides that there are still many traders who still follow the old ways or old habits they use in adding food

additives. This, if allowed to continue, will have an impact on the health of consumers who consume snacks they sell, therefore the role of health workers is needed to disseminate food additives, so that traders can change the behavior of adding food ingredients to the snacks they sell.

The Influence of Knowledge and Attitudes towards Behavior in the Food Traders Group in the Market Environment in the South Ponorogo Regency

The results of statistical tests on the behavior of food traders who use FAM (Food Additives) in the food traders group in the market area of the South Region Ponorogo Regency use a degree of error of 0.05 resulting in a p value of 0,000. If p value <degree of error then H1 is accepted and Ho is rejected or there is influence of knowledge and attitudes towards the behavior of food traders who use FAM (Food Additives) in the food merchant group in the market area of the South Ponorogo Regency.

In this study, the statistical test results obtained from the value of Pseudo R-Square in Nagelkerke is 0.709, which means that knowledge and attitudes influence the behavior of food traders who use FAM (Food Additives) in food traders in the Ponorogo Regency South Area market area of 70.9% and the remainder is influenced by other factors of 29.1%.

From the ordinal regression statistical test, the p-value value in the knowledge factor p = 0.005 <0.05, on the attitude factor p = 0.000 <0.05. The magnitude of influence is indicated by the value of Estimate. X1 variable (knowledge) with 2.743, while X2 variable (attitude) with an estimate value of 26.911. Based on the results of the estimate value or the magnitude of the largest or dominant influence lies in the X2 variable (attitude) with an estimated value of 26.911. So it can be concluded that the most dominant factor affecting Y (behavior) is factor X2 (attitude) with an effect of 26,911 times.

CONCLUSION
1. Most traders over the age of 35 years, namely 94 respondents (89.5%), elementary school education (SD), namely 64 respondents (61%), and the length of selling between 10-35 years as many as 68 respondents (64.8 %)
2. Traders' knowledge about the use of food additives is known that most of the knowledgeable respondents were 56 people (53.3%) out of a total of 105 respondents.
3. The attitude of traders in the use of food additives is known that most of the respondents behaved adequately, namely as many as 71 people (67.6%) out of a total of 105 respondents.
4. The behavior of traders in the use of food additives is known that the majority of respondents behave adequately, as many as 48 people (45.7%) out of a total of 105 respondents.
5. Based on the test using ordinal regression test obtained a value of 2.742 with p value of 0.005 <α = 0.05 because α <0.05, it can be concluded that there is an influence between knowledge and behavior of traders about Food Additives. in the Market Area of the South Region Ponorogo Regency.
6. The results of the statistical tests in this study obtained Pseudo R-Square values in Nagelkerke of 0.709, which means that knowledge and attitudes influence the behavior of food traders who use FAM (Food Additives) in the food traders group in the market area of South Ponorogo Regency at 70.9 % and the rest are influenced by other factors of 29.1%.
7. From the ordinal regression statistical test, the p-value value for the knowledge factor p = 0.005 <0.05, on the attitude factor p = 0.000 <0.05. So it can be concluded that the most dominant factor affecting Y (behavior) is factor X2 (attitude) with an effect of 26,911 times.

SUGGESTION
1. For Respondents
   It is expected that respondents in using food additives for the processing of food to be sold can be correctly and correctly according to the applicable dosages and conditions.
2. For Research Sites
   It is hoped that it can become a reference in increasing knowledge and changing attitudes and behavior of food traders by disseminating information on food additives recommended by the Minister of Health of the Republic of Indonesia Regulation No.722 / MenKes / Per / IX / 88.

3. For the Food and Drug Supervisory Agency (BPOM)
   It is necessary to play an active role in providing information to the public about FAM which is safe to use in food processing.
4. To the community
   Consumers should be more careful in buying processed foods, especially in traditional market areas, by finding as much information as possible for foods that are safe and not disrupt health.
5. For Further Researchers
   The existence of this research can be used as a comparison guide for future researchers by involving food makers both at RT and industrial level.

BIBLIOGRAPHY

Anggrahini, Sri. (2014). *Keamanan Pangan Kaitannya dengan Penggunaan Bahan Tambahan dan Kontaminan*. Diakses di: http://lib.ugm.ac.id/digitasi/upload/732_pp0906016.pdf pada tanggal 10 November 2018.

Arikunto, Suharsimi. (2014). *Prosedur Penelitian.* Jakarta: Rineka Cipta

Azizahwati, Kurnia, M., Hidayat., (2014). *Analisis Zat Warna Sintetik Terlarang Untuk Makanan Yang Berada di Pasaran*, Majalah Ilmu Kefarmasian, IV, (1), 7-8,. Departemen Farmasi FMIPA-Universitas Indonesia Depok.

Azwar, Saifuddin. (2015). *Sikap Manusia Teori Dan Pengukuranya.* Yogyakarta : Pustaka Pelajar

BPOM. (2014). Keputusan Kepala Badan Pengawas Obat dan Makanan Republik Indonesia Nomor : HK.00.05.5.1.4547Tentang Persyaratan Penggunaan Bahan Tamnbahan Pangan Pemanis Buatan dalam Produk Pangan. Jakarta: BPOM RI. Hal. 36.

Cahyadi, W. (2015). *Analisis dan Aspek Kesehatan Bahan Tambahan Pangan*. Bumi Askara. Jakarta.

Cahyadi. (2012). *Penggunaan Bahan Tambahan Pangan.* Jakarta: PT Alumni

Cahyadi. (2014). *Tinjauan bahan Tambahan Pangan*. Jakarta: PT Alumni

DepKes RI (2014). *Aturan Penggunaan Bahan Tambahan Pangan.* Jakarta: Kementrian Kesehatan

DepKes RI. (2012). *golongan Bahan Tambahan Pangan (FAM) yang diizinkan.* Jakarta : Kementrian Kesehatan Republik Indonesia.

Ditjen POM. (2013). *Farmakope Indonesia, Edisi IV*. Departemen Kesehatan Republik Indonesia. Jakarta.

Eddy. (2014). *penggunaan siklamat dalam makanan*. Jurnal Gizi Klinik Indonesia, 12 – 15

Ensiklopedia bebas berbahasa (2014), *Pengetahuan* .www. Wikipedia. Co.Id. download: 3 November 2014

F.G Winarno dan Titi Sulistyowati Rahayu. (2013). *Bahan Tambahan untuk Makanan dan Kontaminan.* Jakarta: Pustaka Sinar Harapan

Hadju, Nurain. (2012). *Analisis Zat Pemanis Buatan Pada Minuman Jajanan Yang Dijual di Pasar Tradisional Kota Manado.*Jurusan Teknologi Pertanian Universitas Sam Ratulagi.

Ikrawan. (2014). *Penggunaan bahan pemanis buatan dalam makanan*. Jurnal Gizi Klinik Indonesia, 15 – 21

Kristianingrum, Susila. (2008). *Metode Analisis Pengawet Bahan Pangan.* FMIPA Universitas Negeri Yogyakarta.

Luthana, K. (2008). Natrium Benzoat. Diakses dari http://yongkikastanyaluthana.wordpress.com/category/natrium-benzoat/ tanggal 13 Maret 2009.

Machfoedz, Eko Suryani. (2015). *Pendidikan Kesehatan Bagian Dari Promosi Kesehatan.* Yogyakarta: Firamaya

Maulana, D.J Heri. (2013). *Promosi Kesehatan.* Jakarta : EGC

Notoatmodjo, Sukidjo. (2014). *Metodologi Riset Kesehatan.*Jakarta : Rineka Cipta

Nursalam, Siti Pariani. (2014). *Pendekatan Praktis Metodologi Riset Keperawatan.* Jakarta : Infomedika

Nursalam. (2008). *Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan.* Jakarta : Salemba Medika

Saparinto, Cahyo dan Hidayati, Diana. (2015). *Bahan Tambahan Pangan.* Yogyakarta: Kanisius.

Sugiyono. (2011). *Metode Penelitian Kuantitatif, kualitatif dan R & D.*Bandung: Alfabeta

Sugiyono. (2014). *Statistika Untuk Penelitian.* Bandung : Alfabeta

Sumarlin, Ode. (2013). *Identifikasi Pewarna Sintetis Pada Produk Pangan Yang Beredar di Jakarta dan Ciputat.* UIN Syarif Hidayatullah Jakarta.

Syah dkk. (2013). *bahaya pemanis buatan.* Jogjakarta: Persada.

Syah et al. (2014). *Manfaat dan Bahaya Bahan Tambahan Pangan.* Bogor: Himpunan Alumni Fakultas Teknologi Pertanian IPB.

Yulianti. (2014). *Menguji Makanan Jajan.* Jurnal Gizi Klinik Indonesia , 20 – 21

Yuliarti. (2013). *Makanan Sehat, Edisi I.* Yogyakarta: Kompas.