

Factors that Influence Consumers' Intention in Choosing Healthy Food Restaurant and the Relationship to their Food Related Lifestyle in Indonesia

Aegea, Kirin Leiman, and Liu, Ming

Abstract— Healthy eating is becoming increasingly important in consumer minds. However, factors that cause consumers to choose healthy food restaurants and the relationship to their food related lifestyle (FRL) were understudied in Indonesia. This study examines the relationship among customer's healthy food choice motives, interest in healthy food menu items intention to order healthy menu items and the relationship to their food related lifestyle. A quantitative self-completed questionnaire was used to gather information. A total of 103 valid questionnaires were collected as a pilot test. The result indicated those who perceived to have high interest for healthy food not necessarily have motivation and intention to choose healthy food restaurant. In addition, a positive relationship between motivation and FRL was observed.

Keywords—Interest, Motives, Intention, Healthy Food Restaurant, Food Related Lifestyle

I. INTRODUCTION

SINCE several decades, the importance of healthy diets is recognized in the light of increasing obesity levels and resulting chronic health problems (Ng *et al.*, 2014). Health eating is gaining global attention as obesity and chronic diseases are becoming prevalent in many parts of the world (Yach *et al.*, 2006). Frequent and consistent eating out of certain meals may cause health problems such as obesity (Ma *et al.*, 2003). Restaurants are now under increased pressure to contribute positively to this problem (Wansink and Love; Josiam and Foster, 2009). In popular press, as contributors to obesity rates because of the calorie and fat content, which increase customers' total calorie consumption (American Cancer Society, 2014). To avoid potential health related problems, customer interest in healthy eating has increased, especially when consuming foods away from home (Jones, 2009).

There is certainly more focus on healthier food items (Parsa and Kahn, 1991; Kim *et al.*, 2013). As restaurant meals tend to be higher in fat and calorie content and larger in portion sizes more people are struggling from reduces dietary quality and obesity (Morley *et al.*, 2013; Mah and Timmings 2015; Kang *et*

al., 2015). The restaurant menu is the main vehicle for communicating such information (McCall and Lynn, 2008).

Although hospitality food scholars acknowledge the importance of food quality in restaurant operations (Auty, 1992; Kivela *et al.*, 1999; Koo *et al.*, 1999; Sulek and Hensley, 2004), what drives the customer's desire to look and order for healthy options on restaurant menu items has been overlooked.

For the next decade, Indonesia has engaged in regrouping strategies in partnership with the World Health Organization, which has brought about new directions to manage the overlap of both communicable and NCD (World Health Organization, 2011). In that future, the present younger will become new market and new customers. And the customers in Indonesia already have their own old lifestyle, and it's one of the factor that will make they decided to buy healthy food based on the lifestyle.

II. LITERATURE REVIEW

A. Interest in Healthy Restaurant Food

Interest in healthy food is defined as an interest in eating foods that are considered reduced-energy products, such as low-fat, low-calorie, or unsweetened foods (Roininen *et al.*, 1999). Interest in healthy food relates to the benefits of eating healthy foods, for example enjoying the natural flavor of foods and being healthy (Roinien, 2001). According to Shepherd (2002), attitudes have been found to be stronger predictors of intentions and behavior. In addition to a food choice motive, interest in healthy food contributes to customers' beliefs that healthy eating is beneficial to their health.

B. Motives in choosing Healthy Restaurant Food

Importance of food attributes indicate people's motives Original food choice motivations conceptualized as health, weight control, sensory appeal, price, convenience, familiarity, mood, and natural content (Steptoe *et al.*, 1995). Lockie *et al.* (2004) found that, after 'naturalness' of food, which focused on the concern of consumers regarding additives, pesticides, and hormones as a motivator for purchasing organic for organic food purchases. Characteristics, such as income, gender, and age, have also been shown to affect food choice motives. Steptoe *et al.* (1995) noted that high, moderate, and low income groups differed significantly in their ratings of price, familiarity, and sensory appeal.

Aegea, Kirin Leiman, is with the Department of Global Business, Chinese Culture University, Taipei, Taiwan (email: aegea_kirin93@hotmail.com)

Liu, Ming, Assistant Professor, is with the Department of Tourism Management, Chinese Culture University, Taipei, Taiwan (email: lm2@pccu.edu.tw)

C. Intention in Choosing Healthy Food Restaurant

Customer intentions to choose low fat food items are strengthened when they believe eating healthy food is a way to achieve their health goals, there by continuing healthy eating behaviors (Chen *et al.*, 2006).

D. Food Related Lifestyle

First introduced by Lazer (1964), lifestyle was mainly used as an umbrella term for using assortments of items measuring activities, interest and opinions” as the basis of segmenting consumers. Later, the notion of domain-specific lifestyles was introduced (van Raaij & Verhallen, 1994), with the food-related lifestyle (FRL) instrument, being the major instrument used for segmentation in the food domain. The FRL attempts to characterize consumers how they employ food and eating to obtain life values.

III. METHODOLOGY

A. Conceptual Framework and Research Hypothesis

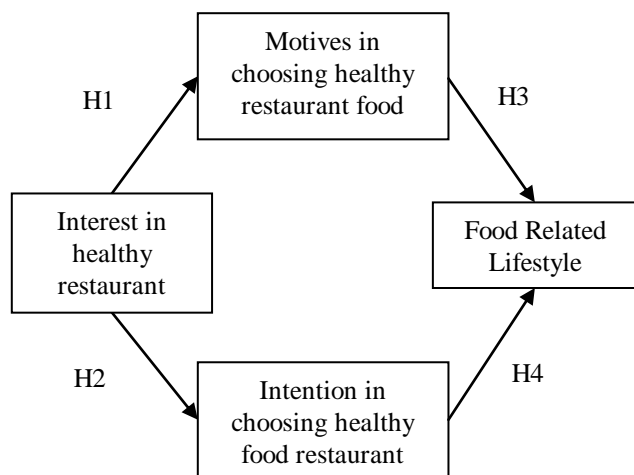


Fig. 1 Conceptual framework of this study

H1: Interest in healthy restaurant food has a positive influence to motives in choosing healthy restaurant food

H2: Interest in healthy restaurant food has a positive influence to intention in choosing healthy food restaurant

H3: Motives in choosing healthy restaurant food has a positive influence to food related lifestyle

H4: Intention in choosing healthy food restaurant has a positive influence to food related lifestyle.

B. Construct Measurement and Questionnaire Design

The questionnaire of this study is consisted of four sections: (1) Interest in healthy restaurant food, (2) intention in choosing healthy food restaurant, (3) Motives in choosing healthy restaurant food, and (4) food related lifestyle. The questionnaire was conducted in online survey. The questionnaire will be measured on a 5-point Likert scale. Respondents will be asked to indicate their level of agreement toward each statement, from 1 = strongly disagree to 5 = strongly agree. Questionnaire will be made both English and

Indonesia language version to make respondent easy to understand and answer the questions.

C. Sampling Plan

In this study, the sample for questionnaire was based on convenience sampling. Convenience sampling is the easiest way to collect the data, and the selection process for required sample size can make until sample size is ready for the analysis. The questionnaire is distributed to Indonesia respondents via online channels such as Facebook, Line, and Instagram.

D. Data Analysis Procedure

In order to achieve the objective of this research and test the hypothesis, SPSS 20.0 software is used to analyze the collected data. The following data analysis methods are conducted as follows:

1. Descriptive Statistical Analysis

Descriptive statistical analysis is used to illustrate the means and standard deviation of each research variable and provide the information about characteristics of respondents in order to get better understanding of each research construct and respondents.

2. Factor Analysis

The purpose of factor analysis is to explore the underlying variance structure of a set of correlation coefficients. Factor analysis was used not only to summarize or reduce data but also for exploratory and confirmatory purposes. According to Pallant (2013), the appropriate data that based on the Kaiser-Mayer-Olkin and Bartlett's Test of Sphericity are considered. The minimum requirement of the Kaiser-Mayer-Olkin should be 0.6 or above while Bartlett's Test of Sphericity should be statically significant at 0.05.

3. Reliability Tests

Reliability test is a measure method to test both consistency and stability. Consistency indicates how well the items measuring a concept hang together as a set. Cronbach's alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. Cronbach's alpha is computed in terms of average inter correlations among the items measuring the concept. The closer Cronbach's alpha is to 1, the higher the internal consistency reliability.

4. Multiple Regression

Multiple regression analysis was used to identify and determine how multiple independent variables are related with dependent variable.

IV. RESULT AND DATA ANALYSIS

Use data was collected in online survey during April 30th 2016 – May 30th 2016 and was distributed via Facebook, Line and Instagram. There are 103 respondents valid data can be used to analyze.

A. Characteristic of Respondents

Sample characteristics of personal information is about 71% of the respondent were female and for about 73% is single. Most of the respondents are in the age 21-30 years old and about 82.5% of the total respondents were college/university as their educational background. Majority of the respondents are private sector employees (37.8%) with the most monthly income Rp 5.000.000 - Rp 10.000.000 /month (Rupiah Dollars). Besides, most of the respondents (72.8%) ever dined in a restaurant provide healthy food menu items.

TABLE I
CHARACTERISTIC OF RESPONDENTS

Classification	Respondents	
	Frequency	Percentage (%)
Gender		
Male	30	29.13
Female	73	70.87
Marital Status		
Single	75	72.82
Married	28	27.18
Age		
Below 20	9	8.74
21-30	85	82.52
31-40	8	7.77
41-50	2	1.94
Education		
High school	9	8.74
College/University	85	82.5
Post graduate	9	8.74
Occupation		
Student	22	21.36
Private Sector Employee	39	37.86
Entrepreneur	32	31.07
Others	10	9.71
Income per month (Rp)		
Rp 0 – Rp 1.000.000,-	17	16.50
Rp 1.000.000 – Rp 5.000.000,-	22	21.36
Rp 5.000.000 – Rp 10.000.000,-	37	35.92
Rp 10.000.000 – Rp 15.000.000,-	14	13.59
More than Rp 15.000.000,-	13	12.62
Have you ever dined in a restaurant provide healthy food?		
Yes	75	72.82
No	28	27.18

B. Factor Analysis and Reliability Test

To verify the dimensionally and reliability of the research dimension, purification processes, including factor analysis, correlation analysis and internal consistency analysis (Cronbach's alpha) are conducted in this study. There are several criterias:

1. Factor loadings higher than 0.5-0.6
2. Kaiser Meyer Olkin (KMO) > 0.5 and Bartlett's test significance < 0.05
3. Eigenvalue > 1
4. Accumulative explained variance > 0.6
5. For the reliability check, Cronbach's alpha (α) > 0.6

For the factor interest in healthy restaurant food, all factor loadings of all items are greater than 0.5. The result for KMO was reported at 0.744 and the result of Bartlett's Sphericity was significant at $p=0.000$. After running the reliability test, Cronbach's alpha is greater than 0.6. This indicates that the results have met all the requirement for the items interest.

For the factor intention, all factor loadings of all items are

greater than 0.5 except question number 8 and 16 but still keep this factor in the analysis since the factor loading value is close to 0.5 and the number of sample may not high enough. The result for KMO was reported at 0.705 and the result of Bartlett's Sphericity was significant at $p=0.000$. After running the reliability test, Cronbach's alpha is greater than 0.6. This indicates that the results have met all the requirement for the items intention.

For the factor motives, all factor loadings of all items are greater than 0.5. The result for KMO at 0.748 and the result of Bartlett's Sphericity was significant at $p=0.000$. After running the reliability test, Cronbach's alpha is greater than 0.6. This indicates that the results have met all the requirement for the items motives.

For the factor lifestyle behavior, all factor loadings of all items are greater than 0.5. The result for KMO at 0.760 and the result of Bartlett's Sphericity was significant at $p=0.000$. After running the reliability test, Cronbach's alpha is greater than 0.6. This indicates that the results have met all the requirement for the items lifestyle behavior.

C. Hypotheses Testing

In predicting interest, intention, motives and lifestyle behavior, multiple regression has been used to analyze. This test was established to observe the relationship among food choice motives and independent variables was interest in healthy food.

As per table II, this table shows the correlation coefficients information for the regression model. This model's coefficients of determinants or R square ($R^2 = 0.024$) obtained indicates that 2.4% of the regression model of motives in choosing healthy restaurant food function can be explained by interest in healthy food). Adjusted $R^2 = 0.014$ with standard error of the estimate is 0.634. In addition, Durbin Watson value (2.113) indicates a positive correlation and there is no auto correlating among the variables.

TABLE II
MODEL SUMMARY

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.156 ^a	0.024	0.014	0.63447	2,113

a. Predictors: (constant), Interest

b. Dependent variable: Motives

TABLE III
ANOVA^A

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	0.995	1	0.993	2.471	0.119 ^a
Residual	39.853	99	0.403		
Total	40.848	100			

a. Dependent Variable: Motives

b. Predictors: (Constant), Interest

Moreover, ANOVA (Table III) is used to examine the significance of the result. The null hypothesis where multiple R in the population is 0 was examined in this analysis. The result of this study present significant = 0.119 indicating $P > 0.05$

TABLE IV
COEFFICIENTS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.522	.0360		12.562	0.005
Interest	0.097	0.062	0.156	1.572	0.119

a. Dependent Variable: Motives

As per table IV, the p value of the product ($p=0.119$) is more than the alpha value of the 0.05. Thus the research can imply that the consumer’s interest to healthy food towards food choice motives is no significantly affects. Hypothesis 1 was not supported.

For hypothesis 2, this model’s coefficients of determinants or R square ($R^2 = .003$) obtained indicates that 0.3% of the regression model of interest in healthy food function can be explained by healthy food choice intention. Adjusted $R^2 = 0.007$ with standard error of the estimate is 1.03. In addition, Durbin-Watson value (1.848) indicates a positive correlation and there is no auto-correlation among the variables.

TABLE V
MODEL SUMMARY

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.054 ^a	0.003	0.007	1.03	1.848

a. Predictors: (constant), Interest

b. Dependent variable: Intention

TABLE VI
ANOVA^A

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	0.312	1	0.312	0.294	0.589 ^a
Residual	104.900	99	1.060		
Total	105.212	100			

a. Dependent Variable: Intention

b. Predictors: (Constant), Interest

The null hypothesis where multiple R in the population is 0 was examined in this analysis. The ANOVA result of this study from table VI present significant = 0.589 indicating $P > 0.05$.

TABLE VII
COEFFICIENTS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.011	0.584		8.581	0.000
Interest	0.054	0.100	0.054	0.543	0.589

a. Dependent Variable: Intention

For coefficients result, the p value of the interest ($p = 0.589$) is more than the alpha value of 0.05. Thus the research can imply that consumer’s interest to healthy food towards healthy food choice intention is no significantly affects. Hypothesis 2 was not supported.

For hypothesis 3, the result shows the correlation coefficients information for the regression model. This model’s coefficients of determinants or R square ($R^2 = .348$) obtained indicates that 34.8% of the regression model of food choice motives function can be explained by healthy food choice intention. Adjusted $R^2 = 0.342$ with standard error of the estimate is 0.49729. In

addition, Durbin-Watson value (1.840) indicates a positive correlation and there is no auto-correlation among the variables.

TABLE VIII
MODEL SUMMARY

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.590 ^a	0.348	0.342	0.497	1.840

a. Predictors: (constant), Motives

b. Dependent variable: Lifestyle

TABLE IX
ANOVA^A

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	13.095	1	13.095	52.954	0.000 ^a
Residual	24.482	99	0.247		
Total	37.578	100			

a. Dependent Variable: Lifestyle

b. Predictors: (Constant), Motives

The null hypothesis ANOVA show result where multiple R in the population is 0 was examined in this analysis. The result of this study present significant = 0.000 indicating $P < 0.05$.

TABLE X
COEFFICIENTS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.119	0.398		5.321	0.000
Motives	0.566	0.078	0.590	7.277	0.000

b. Dependent Variable: Lifestyle

For coefficients result, the p value of the motives ($p = .000$) is less than the alpha value of 0.05. Thus the research can imply that consumer’s food choice motives towards healthy lifestyle behavior is significantly affects. Hypothesis 3 was supported.

For hypothesis 4, the result shows the correlation coefficients information for the regression model. This model’s coefficients of determinants or R square ($R^2 = 0.166$) obtained indicates that 0.3% of the regression model of interest in healthy food can be explained by healthy food choice intention. Adjusted $R^2 = 0.158$ with standard error of the estimate is 0.5626. In addition, Durbin-Watson value (1.887) indicates a positive correlation and there is no auto-correlation among the variables.

TABLE XI
MODEL SUMMARY

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.408 ^a	0.166	0.158	0.563	1.887

a. Predictors: (constant), Intention

b. Dependent variable: Lifestyle

TABLE XI
ANOVA^A

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	6.245	1	6.245	19.731	0.000 ^a
Residual	31.333	99	0.316		
Total	37.578	100			

a. Dependent Variable: Intention

b. Predictors: (Constant), Lifestyle

TABLE XII
COEFFICIENTS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3,698	0.297		12.439	0.000
Intention	0.244	0.055	0.408	4.442	0.000

c. Dependent Variable: Lifestyle

The ANOVA result of this study present significant = 0.000 indicating $P < 0.05$. For coefficients result, the p value of the intention ($p = .000$) is less than the alpha value of 0.05. Thus the research can imply that consumer's healthy food choice intention towards healthy lifestyle behavior is significantly affects. Hypothesis 4 was supported..

V. DISCUSSION

The result of this study from hypotheses 1 and 2 pointed out that individual interest is not the foundation of consumer intention and motives in choosing healthy restaurant; this means that even consumer have high interest in healthy restaurant food, is no significantly affect consumer's motives and intention in choosing healthy food restaurant.

This finding was consistent with Tudoran *et al's* (2012), customers may not choose healthy menu items if they don't perceived physical or psychological benefit. Interest in healthy food was found to be mediating factor, indirectly not influence customer's intention and motives to choose healthy menu restaurant.

For hypotheses 3 and 4, this study segmented consumer's intention and motives have influence for their food related lifestyle. It means customer's food related lifestyle were enhanced by their intention and motivation to choose healthy food restaurant. The finding of this study confirmed from Kim *et al* (2013), a positive or negative attitude is directly related to the strength of the behavioral intent, the stronger the intention to undertake the behavior, the more likely that behavior will actioned.

REFERENCES

- [1] American Cancer Society, 2014. Eating at fast food, full service restaurants linked to more calories, poorer nutrition .In: Science Daily, Available online at: www.sciencedaily.com/releases/2014/08/140807105211.htm (accessed 03.12.15).
- [2] Auty, S., 1992. Consumer choice and segmentation in the restaurant industry. *Service Industries Journal* 12 (3), 324-339.
- [3] Chen, J.S., Legrend, W., Sloan, P., 2006. Factors influencing healthy meal choice in Germany. *J. Tour.* 54 (4), 315-322.
- [4] Jones, C., 2009. Taking up space? How customers react to health information and health icons on restaurant menus. *J. Foodserv. Bus. Res.* 12 (4), 344-464
- [5] J. Wang, "Fundamentals of erbium-doped fiber amplifiers arrays (Periodical style—Submitted for publication)," *IEEE J. Quantum Electron.*, submitted for publication.
- [6] Josiam, B., Foster, C., 2009. Nutritional information on restaurant menus who cares and why restaurantseurs should bother. *Int. J. Contemp. Hosp. Manag.* 21 (7), 876-891.
- [7] Kang, J., Jun, J., Arendt, S.W., 2015. Understanding customers' healthy food choicesat casual dining restaurants: using the Value-Attitude-Behaviour model. *Int. J.Hosp. Manag.* 48, 12-21.
- [8] Kim, E., Ham, S., Yang, I., Choi, J., 2013. The roles of attitude, subjective norm, and perceived behavioral control in the formation of consumers'

- behavioral intentions to read menu labels in the restaurant industry. *Int. J. Hosp. Manag.* 35, 203-213.
- [9] Kivela, J., Inbakaran, R., Reece, J., 1999. Consumer research in the restaurant environment, Part 1: A conceptual model of dining satisfaction and return patronage. *International Journal of Contemporary Hospitality Management* 11 (5), 205-222.
- [10] Koo, L.C., Tao, K.C., Yeung, J.H.C., 1999. Preferential segmentation of restaurant attributes through conjoint analysis. *International Journal of Contemporary Hospitality Management* 11 (5), 242-253
- [11] Lazer, W. (1964). Lifestyle concepts and marketing. In S. A. Greyser (Ed.), *Towards scientific marketing* (pp. 424-438). Chicago, IL: American Marketing Association.
- [12] Lockie, S., K. Lyons, G. Lawrence and J. Grice, 2004. Choosing organics: a path analysis of factors underlying the selection of organic food among Australian consumers. *Appetite*, 43(2): 135-146
- [13] Mah, C.L., Timmings, C., 2015. Equity in public health ethics: the case of menu labelling policy at the local level. *Public Health Eth.* 8 (1), 85-89.
- [14] Ma, Y., Bertone, E.R., Stanek III, E.J., Reed, G.W., Herbert, J.R., Cohen, N.L., Merriam, P.A., Ockene, I.S., 2003. Association between eating patterns and obesity in a free-living US adult population. *Am. J. Epidemiol.* 158 (1), 85-92.
- [15] McCall, M., Lynn, A., 2008. The effects of restaurant menu item descriptions on perceptions of quality, price and purchase intentions. *J. Food serv. Bus. Res.* 11(4), 439-445.
- [16] Ng M, Fleming T, Robinson M, Thomson B, Graetz N, Margono C, et al. 2014. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 384(9945):766-781, doi: 10.1016/S0140-6736(14)60460-8.
- [17] Parsa, H.G., Kahn, M.A., 1991. Menu trends in the quick service restaurant industry during the various stages of the industry life cycle (1919-1988). *Hosp. Res. J.* 15 (1), 93-109.
- [18] Roininen, K., L'ahteenm'a ki, L. ,Tuorila,H., 1999. Quantification of consumer attitudes to health and hedonic characteristics of foods. *Appetite* 33 (1), 71-88.
- [19] Steptoe, A., Polland, T.M., Wardle, J., 1995. Development of a measure of the motives underlying the selection of food: the food choice questionnaire. *Appetite* 25 (3), 267-284.
- [20] Sulek, J.M., Hensley, R.L., 2004. The relative importance of food, atmosphere, and fairness of wait: The case of a full-service restaurant. *Cornell Hotel and Restaurant Administration Quarterly* 45 (3), 235-247.
- [21] van Raaij, W. F., & Verhallen, T. M. M. (1994). Domain-specific market segmentation. *European Journal of Marketing*, 28, 49-66.
- [22] Wansink, B., Love, K., 2014. Slim by design: menu strategies for promoting high margin, healthy foods. *Int. J. Hosp. Manag.* 42, 137-143.
- [23] World Health Organization, Country Office for Indonesia. WHO country cooperation strategy 2007-2011-Indonesia. 2008. (Cited 4 Dec 2014). Available from URL: http://www.who.int/countryfocus/cooperation_strategy/ccs_indonesia_2007_2011_en.pdf
- [24] Yach, D., et al. "Epidemiologic and Economic Consequences of the Global Epidemics of Obesity and Diabetes." *Nature Medicine*, Vol. 12, 2006. Pp 62-66.