THE RELATIONSHIP BETWEEN MOTIVES FOR EATING TASTY FOOD AND BINGE EATING TENDENCIES IN EARLY ADULTS IN DKI JAKARTA

Fairuz Qisty[1], Haris Indra Susilo[2] & Muhammad Thohir[3]
email : fairuz.qisty@binus.ac.id[1], haris.indra.susilo@gmail.com[2], muhammadthohir1227@gmail.com[3]
Faculty of Psychology
Program Study Masters of Psychology Profesi
Persada Indonesia University Y.A.I. Jakarta **INDONESIA**

ABSTRACT

This research was conducted to find out the relation between palatable food eating motives (PEMS) and binge eating tendency among young adults in DKI Jakarta. The research applied quantitative methods with 100 young adults having age range from 18-25 years. Palatable food eating motives was measured using Indonesian Palatable Eating Motives Scale (I-PEMS) and binge eating tendency was measured using Binge Eating Scale (BES). Research data processing uses pearson correlation techniques and shows the results of the positive correlation coefficient of 0.244 with a significance level of 0.015 (p<0,05). That means, there is a positive and significant correlation between palatable food eating motives and binge eating tendency. It can be concluded that there is a relationship between palatable food eating motives and binge eating tendency among young adults in DKI Jakarta.

Keywords: Palatable Food Eating Motives, Binge Eating Tendency, young Adults.

INTRODUCTION

Individuals who are in the early adult development stage are one group that has a high risk of developing binge eating tendencies. According to Santrock (2011), early adulthood is a period of individual development that takes place between the ages of 18-25 years. This is shown by the high number of data from the early adult group who have a tendency to binge eat. Based on research conducted by Corning, Krumm, & Smitherman (in Valkyrie & Shelton, 2017) on student respondents who were early adults and obtained results namely: of 203 participants (23%) who met the requirements for a diagnosis of anorexia, 169 participants (19, 2%) reported symptoms of bulimia, and 493 participants or more than half of the sample (56%) were binge eaters. In addition, one in every 100 American students binge eats and vomits to lose weight (Hewitt & Gray, in Valkyrie & Shelton, 2017). Apart from that, the large number of binge eating sufferers can also be seen in DKI Jakarta. According to the international data base from the Census Bureau in 2004 (in Nadia Audah, 2018), the number of binge eating disorder sufferers in DKI Jakarta was 1,669,170 of the total population or 218,452,952 people.

Binge-eating disorder (BED) is a persistent, deviant eating pattern in which food is consumed in large amounts over discrete periods of time, with a sense of loss of control over how much or what is eaten and which is accompanied by shame, disgust, or regret, and suffer greatly (Boggiano, et al, 2014). According to Kring, Davison, Johnson, & Neale (2014), this disorder includes repeated binge eating episodes (occurring once a week for at least three months), lack of control during binge eating episodes, and feeling sad when experiencing binge eating. as well as other characteristics, such as eating quickly and eating alone. (Hudson et al. 2007; Nolen-Hoeksema, 2014).

Individuals who are experiencing binge eating episodes themselves prefer to consume delicious food, not only because delicious food has high palatability, but also because it has a greater calorific value, making it difficult for these individuals to limit and control the food they consume. According to Boggiano, et al (2014), "delicious foods and drinks" such as desserts, junk food, fast food, fried food, sweet drinks or other salty snacks are foods that stand out in binge eating disorder (BED).

According to Burgess, Turan, Lokken, Morse, & Boggiano (2014), palatable food is food that is usually made to taste delicious because it contains higher levels of fat, sugar and salt and because it tends to be dense in calories. The measuring tool used to identify individuals' motives for eating delicious food is called the Palatable Eating Motives Scale (PEMS). The motives for eating delicious food contained in this measuring tool are divided into four motives, namely the coping motive, namely the urge to eat that a person has to forget worries and problems, and to feel better if they experience negative moods and situations, the reward enhancement motive is the urge to eat that a person has to feel pleasure and enjoyment from the food itself, the social motive is carried out to increase the pleasure of a party or other gathering event, the conformity motive is the urge to eat a person because he gives in to pressure from family or friends or conforms to other people . Burgess, Turan, Lokken, Morse, & Boggiano (2014) created this PEMS measuring tool with the idea that individual motives for consuming delicious food are similar to individual motives for consuming alcohol which results in dependence on alcohol.

The food industry such as the fast food industry, contemporary food industry and other culinary industries has experienced rapid growth over the last few years. Data from the Ministry of Industry shows that the growth of the food and beverage industry in 2017 reached 9.23 percent or increased from 2016 which reached 8.46 percent (Mahardika, 2020, p. 2). This growth causes students to encounter the food and beverage industry around their campus and allows them to have a tendency to binge eat.

The motive for eating delicious food was obtained from the PEMS results. The motive for eating delicious food itself has several similarities with the characteristics of binge eating. These two variables have some relationship. According to Boggiano et al (2014), delicious foods are consumed for reasons other than hunger, high palatability also makes delicious foods difficult for individuals to limit and control, and their large caloric value will contribute to causing distress, shame and guilt which corresponds to characteristics of binge eating disorder and other binge-eating conditions. These similarities are what made researchers interested in finding out whether there is a relationship between the motive for eating delicious food and the tendency to binge eat among students in DKI Jakarta. Similar research was also conducted by Boggiano et al on 247 students in America and found that the total score of the Binge Eating Scale (which measures binge eating tendencies) had a strong relationship with the PEMS total score and scores on coping motives and reward enhancement on the PEMS.

The aim of this research is to determine the relationship between the motive for eating delicious food and the tendency to binge eat among young adults in DKI Jakarta.

RESEARCH METHODOLOGY
Variable
The variable examined in this research is the motive for eating delicious food (PEMS) which consists of the overall motive for eating delicious food with the tendency to binge eating among young adults in DKI Jakarta. The motive for eating delicious food in this study was defined as the frequency of participants consuming delicious food in certain situations during the past

year. Meanwhile, binge eating tendencies are defined as indications of mild, moderate and heavy binge eating experienced by respondents.

Participants

In general, participants in this study have the criteria for individuals who are early adults in the age range of 18 to 25 years, domiciled in DKI Jakarta, fall into the binge eating indication category (have a total BES score of at least 1 (>1) and do not have the idea of delicious food is a far cry from what PEMS has defined. (e.g., individuals consider fruit, yogurt and other healthy foods as delicious foods which are very different from other types of delicious foods such as fast food, fried foods, etc.).

The total number of participants in this study was 110 participants, but only 100 participants met the research criteria. Of the 100 participants consisting of 48 men and 52 women. The age of the participants was dominated by participants aged 23 years with a total of 26 people. The following is a table that shows an overview of the research variables:

Table 1: Overview of Research Variable

Variable	*Min*	*Max*	*Mean*
The overall motive of eating delicious food	25.00	80.00	50.45
Binge eating tendencies	1.00	34.00	12.51

From the table above it can be seen that the minimum value of the total score for the motive for eating delicious food as a whole is 25.00 and the maximum total score obtained is 80.00 with a mean of 50.45, while for binge eating tendencies the minimum total score is 1.00 and the maximum total score is 34.00 with mean 12.51. Apart from that, participants also fell into 3 different indications of binge eating. The following is a table that shows an overview of participants' binge eating indications:

Table 2: Overview of Indications of Binge Eating Tendencies

Indications of binge eating	Frequency
Light	77
Currently	20
Heavy	3

Based on the data distribution table above, it can be seen that the participants (students) who had indications of light binge eating were 77 respondents, the respondents who had indications of moderate binge eating were 20 respondents and the respondents who had indications of heavy binge eating were 3 respondents with a percentage of 2.7 % of all existing data.

The sampling technique used in this research is nonprobability sampling with a sampling technique in the form of purposive sampling. This sampling technique was chosen because respondents in this study must meet all participant criteria and this technique allows researchers to exclude respondents who do not meet the predetermined criteria.

Research Design

This research is a quantitative research with a correlation method to determine the relationship between variable X (motive for eating delicious food) and variable Y (tendency to binge eating). The data processing technique in this research is Pearson correlation analysis. The data collection technique used in this research is a questionnaire (Survey). According to Gravetter & Forzano (2012), surveys and questionnaires are widely used in behavioral science as a relatively efficient way to collect large amounts of information. By asking people several carefully planned questions, it is possible to obtain answers regarding attitudes, opinions, personal characteristics, and behavior from self-reports (Gravetter & Forzano 2012).

Measuring Instrument

The measuring instrument used in this research is the Indonesian Palatable Eating Motives Scale (I-PEMS) Binge Eating Scale (BES). I-PEMS is a measuring tool to identify individuals' unique motives in consuming delicious food and consists of 20 items. There are four motives for eating delicious food in I-PEMS, namely coping, reward enhancement, social and conformity which are measured in 20 items/questions. The scale used in this measuring instrument is a Likert scale (1-5) with the provisions 1 (Never/Almost never), 2 (Some of the time), 3 (Most of the time), 4 (Most of the time) and 5 (Always). The results of PEMS are flexible so that motives for eating delicious food can be seen both overall (via total score) and per motive for eating delicious food in accordance with the objectives of this research.

Based on research results, the I-PEMS measuring instrument has good internal reliability with Cronbach's α ranging from 0.72 to 0.89 at t1 and 0.76 to 0.92 at t2 (Boggiano et al, 2015). Apart from that, for item validity, all items are declared valid because all items in I-PEMS have factor loadings of more than 0.05 (> 0.05) so it can be said that all items in I-PEMS have good validity and are incorporated into a construct. (Cahyani, Iskandarsyah, Cahyadi and Srisayekti, 2020).

Meanwhile, the BES is used to measure the level of binge eating tendencies possessed by individuals (in the form of indications of binge eating) with 16 items. BES This measuring tool was designed by Gormally et al and translated into Indonesian by Nadia Audah in 2018. There are 3 indications of binge eating with a total score classification obtained by individuals, namely a score of 1-17 points indicating mild binge eating, 18-26 points indicate moderate binge eating and a score above 27 points indicates severe/acute binge eating.

Based on the research results, the BES has acceptable reliability because the Cronbach's alpha value is 0.85 (Azhar, & Azmi (2013). Apart from that, for item validity based on the CFA test results, it can be seen that all items from the BES have good validity (Nadia Audah, 2018).

Research Procedure

In this research, the researcher made several preparations in carrying out the research. The preparation stage for this research is divided into two parts, namely research studies and determining the measuring instruments that will be used in the research. The details of the planning stages of this research are preliminary study, variable determination and discussion, and determination of research measuring instruments.

Preliminary studies are an important stage in research preparation so that researchers have an overview of information regarding the variables that will be used in the research. This stage is carried out so that research activities can be carried out optimally. In preparing for this research, researchers used paper studies, namely studies carried out by obtaining information about

phenomena from written media such as books and journals. The books that researchers read and used in this research were psychology books that discussed the importance of eating and eating disorders as a whole. Meanwhile, the journals that researchers read and used in this research were journals that discussed motives for eating delicious food, measuring instruments for motives for eating delicious food, binge eating and the binge eating scale. After the researcher obtained the phenomenon, the researcher held a discussion with the supervisor to determine variable X and variable Y according to the phenomenon that had been obtained. The researcher determines the measuring instruments that will be used in the research in order to provide accurate and comprehensive data results from the variables studied in this thesis. The researcher determined the appropriate measuring instrument for the variable by reading journals that discussed the topic of measuring the motive for eating delicious food and the tendency to binge eat.

As a result, the researchers decided to use a translation of the Indonesian-Palatable Eating Motives Scale (PEMS) measuring tool which was translated and published by Iskandarsyah, Cahyadi, and Srisayekti in 2020 in the journal "Using Confirmatory Factor Analysis to Evaluate Construct Validity of the Indonesian Palatable Eating Motives Scale (I-PEMS)" as a tool for measuring motives for eating delicious food and the Binge Eating Scale which has been translated by Nadia Audah (2018).

After preparing the research, the researcher carried out the research. At this stage, researchers distributed questionnaires online via a Google Form link to participants (namely students) via short messages or social media. The sample size targeted in this research is 100 students with a percentage of 50% men and 50% women.

The final stage of this research procedure is determining data processing techniques. Data processing techniques are one of the stages that determine the success of a research because data processing functions to conclude the overall research results. The data processing technique in this research is Pearson correlation analysis. According to Gravetter & Forzano (2012), Pearson correlation describes a linear relationship between two variables. Whenever there is a linear relationship, it is possible to calculate the equation for the straight line that provides the best fit to the data points (Gravetter & Forzano, 2012).

RESULTS AND DISCUSSION

All research data met all Pearson correlation assumptions and hypothesis testing was carried out using Pearson correlation analysis. The research's main hypothesis was tested by analyzing the correlation between the overall motive for eating delicious food and the tendency to binge eat by looking at the value of the significance level and correlation coefficient between the two variables. The basis for making this decision is that if the significance level value is <0.05 then Ho (main) is rejected and Ha(main) is accepted, but if the significance level value is > 0.05 Ho(main) is accepted and Ha(main) is rejected.

Table 1: Test the Main Hypothesis

		PEMS Total	BES Total
	Pearson Correlation	1	.244*
PEMS	Sig. (2-tailed)		.015
	N	100	100
	Pearson Correlation	.244*	1
BES	Sig. (2-tailed)	.015	
	N	100	100

*. Correlation is significant at the 0.05 level (2-tailed).

In the table above it can be seen that the significance level is 0.015 < 0.05 which indicates that H0 (Main) is rejected and Ha (Main) is accepted, meaning there is a significant relationship between the motive for eating delicious food (obtained from the PEMS results) and the tendency to binge eat (obtained from BES results). The correlation coefficient value of 0.244 shows that the relationship between these two variables is positive. This means that the high motive for eating delicious food is followed by a high tendency for binge eating among young adults. However, the relationship between these two variables is weak because the coefficient value of the correlation is only at the limit of 0.2.

Table 2: Additional Hypothesis Testing

		Coping	*Reward Enhancement*	Social	Conformity
BES Total	Pearson Correlation	0,394	0,096	-0,043	0,269
	Sig. (2-tailed)	0,000	0,341	0,673	0,007
	N	100	100	100	100

Based on the table above, it can be seen that the SPSS interpretation results show that the coping motive subscale in PEMS has a Pearson correlation coefficient value with BES results of 0.394 with a significance level / p-value of 0.000 and smaller than 0.05 (<0.05). This indicates that Ho1 (Additional) is rejected and Ha1 (Additional) is accepted. This means that there is a significant relationship between coping motives in PEMS and binge eating tendencies among young adults.

The Pearson correlation between reward enhancement motives and binge eating tendencies is 0.096 with a significance level / p-value of 0.341. Because the significance level is more than 0.05 (>0.05), Ho2 (Additional) is accepted and Ha2 (Additional) is rejected. This means that there is no significant relationship between the reward enhancement motive in PEMS and the tendency to binge eating among young adults.

The social motive for eating delicious food has a Pearson correlation coefficient with binge eating tendencies of -0.043 with a significance level / p-value of 0.673. This means that because the p-value of the correlation is >0.05, Ho3 (Additional) is accepted and Ha3 (Additional) is rejected and it can be seen that there is no significant relationship between social motives in PEMS and the tendency to binge eat among young adults.

The Pearson correlation between conformity motives and binge eating tendencies is 0.269 with a significance level / p-value of 0.007. This means that because the p-value of the correlation is <0.05, Ho4 (Additional) is rejected and Ha4 (Additional). This means that there is a

significant relationship between the conformity motive in PEMS and the tendency to binge eat among young adults.

The results obtained in this study indicate that there is a relationship between the overall motive for eating delicious food and the tendency to binge eat among young adults in DKI Jakarta. Even though this relationship is also positive, unfortunately the relationship between these two variables is at a weak level. The weak level of relationship between the motive for eating delicious food and the tendency to binge eat in DKI Jakarta occurs because the majority of respondents in this study have a weak level of binge eating tendency. The research results of Boggiano et.al., (2014) show that individuals who have indications of moderate/severe binge eating have higher PEMS scores than individuals who have indications of mild binge eating. This can affect the research results, resulting in minimal value of the significance of the correlation between these two variables.

The level of weak relationship between these two research variables shows that the overall motive for eating delicious food (based on the respondent's total PEMS score) cannot be used as the only basis for determining the high tendency of binge eating among these young adults. To find out more about the relationship between these two variables, additional analysis was carried out to find out which motive had the strongest relationship with the tendency to binge eat.

From the results of additional analysis, it can be seen that the coping motive has the strongest relationship with the tendency to binge eating compared to the other three eating motives. Research conducted by Boggiano et al (2014) also showed that coping motives had the greatest correlation with the tendency to binge eating compared to other motives for eating delicious food (namely reward enhancement motives, social motives and conformity motives. In this study, coping motives were correlated with several sources of stress reactivity (not all. The research results of Boggiano et al (2014) also show that coping motives are the most stable motives and are correlated with several emotion-triggered urges to eat (not "emotional eating"), and high coping scores correlated with several characteristics of eating disorders (not all). This means that the coping scores of respondents in this study also had a correlation with the characteristics of binge eating tendencies. Predisposing factors in binge eating (the cause of individuals developing binge eating driven by negative emotions such as depression and anxiety) and factors Symptom triggers (i.e. stress) are correlated with high coping motive scores.

The reward enhancement motive does not appear to have a significant relationship with the tendency to binge eat among students in DKI Jakarta. This result is different from the research results of Boggiano et al, 2014. In the results of this research, the reward enhancement motive showed a correlation with binge eating (based on BES scores). Even though there is a correlation, Boggiano et al (2014) explain that respondents who have a high conformity motive have not had difficulties with food for a long time and do not have a direct relationship with binge eating.

The results of additional analysis also show that social motives do not have a significant relationship with the tendency to binge eating among young adults in DKI Jakarta. Research conducted by Boggiano et al (2014) also shows that social motives have no correlation with BES scores. Boggiano et al (2014) explained that in social motives, delicious food is used for social reasons and is different from reward enhancement and conformity motives which indicate the use of delicious food which is psychologically unhealthy.

The results of additional analysis also show that the conformity motive is also related to the tendency to binge eating among young adults in DKI Jakarta. The research results of Boggiano et al (2014) also show that conformity is correlated with BES scores. According to Boggiano et al (2014), consuming delicious food to conform to other people shows that the use of delicious food is psychologically unhealthy. This does not rule out the possibility that the initial habit or tendency to eat delicious food, especially because of conformity, will not facilitate the development of binge eating, especially if there are known genetic or other predisposing factors (for example, negative influences, stress, or a restrictive diet).

Researchers also realize that there are many limitations and shortcomings in this research due to several factors such as the lack of studies, the number of respondents due to the short time for data collection and the time given to complete this research.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this research, it can be concluded that there is a significant relationship between the overall motive for eating delicious food and the tendency to binge eat among young adults in DKI Jakarta. In addition, the correlation coefficient shows that the relationship between these two variables shows a positive relationship with a weak level of strength.

From the results of additional analysis by conducting correlation tests between each motive for eating delicious food (which consists of coping motives, reward enhancement motives, social motives and conformity motives), it was found that there was a significant relationship between coping motives and conformity motives and the tendency to binge eating among young adults. in DKI Jakarta. Coping motives have a positive relationship with binge eating tendencies among young adults and the relationship between these two variables is at a moderate level. The conformity motive also appears to have a significant positive relationship with binge eating tendencies and has a weak level of relationship strength. Meanwhile, the results of additional analysis show that reward enhancement motives and social motives do not have a significant relationship with the tendency to binge eating among young adults in DKI Jakarta.

Suggestions that can be given for further research are that future researchers are expected to increase the number of respondents so that the level of data validation can be higher and the research data can be more varied. Apart from that, future researchers are expected to only include respondents who have moderate and severe levels of binge eating tendencies so that the correlation results of these two variables can be more accurate, can use other better and more precise measuring tools to measure the level of binge eating tendencies and can consider variables -other variables that might influence the motive for eating delicious food and the tendency to binge eat (such as gender, body mass index, and age of the respondent).

REFERENCE

Audah, N. (2019). *Test the Construct Validity of the Binge Eating Scale Instrument Using the Confirmatory Factor Analysis (CFA) Method.* Indonesian Journal of Psychological and Educational Measurement (JP3I), 7(2), 71-77. doi:10.15408/jp3i.v7i2.12098.

Bodywhys. (2015). *Binge Eating: Breaking the Cycle: A Self-Help Guide Towards Recovery.* Blackrock, Co. Dublin: Bodywhys.

Boggiano, M., Burgess, E., Turan, B., Soleymani, T., Daniel, S., Vinson, L., … Morse, A. (2014). *Motives for Eating Tasty Foods Associated with Binge-Eating. Results From a Student and a Weight-Loss Seeking Population.* Appetite, 83, 160-166.

doi:10.1016/j.appet.2014.08.026.

Boggiano, M. M., Wenger, L. E., Burgess, E. E., Tatum, M. M., Sylvester, M. D., Morgan, P. R., & Morse, K. E. (2015). *Eating Tasty Foods to Cope, Enhance Reward, Socialize or Conform: What Other Psychological Characteristics Describe Each of These Motives?* Journal of Health Psychology, 1-10. doi: 10.1177/1359105315600240.

Boggiano, M., Wenger, L., Turan, B., Tatum, M., Morgan, P., & Sylvester, M. (2015). *Eating Tasty Food to Cope. Longitudinal Association With BMI.* Appetite, 87, 365-370. doi: 10.1016/j.appet.2015.01.008.

Brace, N., Snelgar, R., & Kemp, R. (2013). *SPSS for Psychologists.* New York: Psychology Press. p.155.

Burgess, E., Turan, B., Lokken, K., Morse, A., & Boggiano, M. (2014). *Profiling the Motives Behind Hedonic Eating.* Preliminary validation of the Palatable Eating Motives Scale. Appetite, 72, 66-72. doi:10.1016/j.appet.2013.09.016.

Cahyani, A., Iskandarsyah, A., Cahyadi, S., & Srisayekti, W. (2020). *Using Confirmatory Factor Analysis to Evaluate Construct Validity of the Indonesian Palatable Eating Motives Scale (I-PEMS).* The Open Psychology Journal, 13(1), 1-4. doi:10.2174/1874350102013010001.

Fazzino, T. L., Rohde, K., & Sullivan, D. K. (2019). *Hyper-Palatable Foods: Development of a Quantitative Definition and Application to the US Food System Database.* Obesity, 27(11), 1761-1768. doi:10.1002/oby.22639.

Gravetter, F. J., & Forzano, L.-A. B. (2012*). Research Methods for the Behavioral Sciences* (Vol. 4e). Australia: Wadsworth.

King, L. A. (2014). *The Science of Psychology: an Appreciative View.* New York, NY: McGraw-Hill Education. p.335.

Kring, A. M., Davison, G. C., Johnson, S. L., & Neale, J. M. (2014). *Abnormal Psychology* (Vol. 12e). Hoboken, NJ: Wiley. p.338.

Mahardhika. R. B. (2020). *Getting to know the Food and Beverage Industry in the Industrial Era 4.0.* Yogyakarta: Forbil Institute. Accessed from https://forbil.org/manage/statics/publication/21/Forbil_EBook_Series_Okt-I_Industri_Makanan_dan_Drinks.pdf.

Murisal, & Putra, R. A. (2017). *Motives and Impact of Early Marriage in Indarung Ngalau Batu Gadang.* Al-Fuad Journal, I.I, 3. Accessed from http://ecampus.iainbatusangkar.ac.id/ojs/index.php/alfuad/article/download/1153/1.

Nolen-Hoeksema, S. (2014). *Abnormal Psychology (6th ed.).* New York, NY: McGraw-Hill Education. p.346.

Pramiyanti, A., Putri, I. P., & Nureni, R. (2014). *Adolescents' Motives in Using New Media (Study of Adolescents in Sub-Urban Areas of Bandung City).* CommuniTi, VI, 95-103. Accessed from http://journals.ums.ac.id/index.php/komuniti/article/download/2783/1776.

Santrock, John W. (2011). *Life-Span Development: Life Span Development, Edition 13, Volume II.* Jakarta : Erlangga.

Shelton, V. L., Valkyrie, K. T. (2017). *College Student Stress: A Predictor of Eating Disoder Precursor Behaviors.* Open Journal of Epidemiology, 07(02).

Robert, S. A., Rohana, A. G., Suehazlyn, Z., Maniam, T., Azhar, S. S., & Azmi, K. N. (2013). *The Validation of the Malay Version of Binge Eating Scale: A Comparison with the Structured Clinical Interview for the DSM-IV.* Journal of Eating Disorders, 1(1). doi:10.1186/2050-2974-1-28.