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**ARE THERE CORRELATION BETWEEN STRESS LEVELS AND EATING BEHAVIOR
ON THE LAST GRADE STUDENTS OF BACHELOR IN NURSING SCIENCE STUDY
PROGRAM**

By

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Abstract

Stress is a human's response both physically and emotionally while there may be any alternative within the environment that requires a person to adjust. Many people use food as a coping mechanism to deal with feelings such as stress, boredom, or anxiety. Students who deal with academic stressors are at increased risk of food consumption. This study aims to determine the correlation between stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences Study Program at STIKES Banyuwangi in preparing their thesis in 2022. This research used cross-sectional design study and total sampling technique. Data were collected by using DASS 42 (Depression Anxiety Stress Scale 42) and DEBQ (Dutch Eating Behavior Questionnaire) and were spread using google form. For the statistical analysis, it was used Spearman Rank test with SPSS version 25 for Windows. The results showed that 35% of students suffered from moderate stress in preparing their thesis and 63% of them experienced moderate eating behavior. The results of analysis obtained significant research results with closeness correlation value of 0.498. It was obtained P-value of 0.000 which means P less than 0.05, thus there was correlation between the two variables and the coefficient value direction was positive. It is very important for the last grade students to improve their ability in managing their stress levels, particularly when they write their thesis, to avoid stress and negative impact of eating behavior.

Keywords: Stress Level, Eating Behavior, Last Grade Students

BACKGROUND

Stress is someone's response both physically and emotionally while there may be an alternative within the environment that requires a person to adjust (P2PTM, 2021). The stress experienced over an upcoming test is a reminder to study, a way to raise the stakes so that students recognize the importance of being prepared (Terada, 2018). Many people use food as a coping mechanism to deal with feelings such as stress, boredom, or anxiety, or even to prolong feelings of joy. Nevertheless, eating food may cause some bad effects for the health, such as elevated blood sugars, cholesterol levels, or blood pressure (Cleve and clinic, 2020). Students who deal with academic stressors, such as exams, are at increased risk of food consumption (Al Jaber, 2019).

The prevalence of stress according to WHO is quite high, which is experienced by 350 million people in the world (Prabamurti et al., 2017). Based on RISKESDAS records of the Ministry of Health of the Republic of Indonesia (2018), the prevalence of stress in the population aged 15 years and over were 9.8% in 2018 (RISKESDAS, 2018). Meanwhile, the prevalence of stress experienced by Indonesian students were 36.7-71.6% (Ningsih et al., 2018). Furthermore, a research conducted by Trimawati and Wakhid (2018) showed there were 37 out of 76 (48.7%) respondents who were in the process of writing the thesis had eating behavior. This is also supported by a statement from a research conducted on Nutrition students of Airlangga University that explained the more severe the stress experienced by students who wrote a thesis

the more the chances they have overeating behavior (Syarofi & Muniroh, 2019).

Based on the results of a preliminary study conducted on November 7th, 2021 through an online DASS-42 questionnaire on 10 last grade nursing students it was found 3 students suffered from mild stress, 3 students suffered from moderate stress, and 4 students suffered from severe stress. While from DEBQ, it was obtained 5 of 10 students experienced eating behavior. Thesis is a final course that takes a long time which makes students pessimistic, confused in making the title or in the process, which then increase anxiety, confusion, and depression. Because of the difficulty of the thesis, it will cause stress on students who continue the process of working on the thesis, which causes an individual's adaptive response to the stimulation of excessive psychological or physical demands (Hawari, 2012). This study focused on how big is the correlation between stress and eating behavior, namely restraint eating, emotional eating, and external eating in students who were working on their thesis.

Under certain stressful conditions, especially in students who working in the thesis, some people can lose weight due to decreased appetite (Syarofi & Muniroh, 2019). There are several people when they are under stress will eat large amounts of food. Adverse effects that are felt are in the form of decreased brain function, reduced activity capacity, insulin resistance, poor sleep quality, indigestion, and heartburn, as well as mood problems and obesity (McLaughlin, 2014). On the report of Harvard Mental Health Latter study, when stress happens, the body will stimulate the brain and the adrenal glands to increase appetite and motivation to eat (Gori & Kustanti, 2018). The impact of eating too much, too little, or eating the wrong types of food was summed up in the latest Global Nutrition Report, which found that poor diets accounted for nearly one in five deaths. It is no wonder that the prevalence of non-communicable diseases (NCDs) has also increased within the past five years. Zellner DA in Choi (2020) confirmed that

once under pressure, humans choose “unhealthy food” (e.g., high-calorie food, high-fat snack, sugary food, sweets, and carbohydrate-rich food) as opposed to healthful food (Choi, 2020). Regardless of the purpose of writing a thesis, students who are writing the thesis face their own challenges and are at risk of increased food intake (Gryzela, 2020).

Excessive stress on the last grade students can be prevented if students prepare themselves well, for example by taking a deep breathe, doing meditations, setting boundaries, accepting that there are events that cannot be controlled, being assertive instead of aggressive, asserting the feelings, opinions, or beliefs instead of becoming angry, defensive, or passive, making time for hobbies and interests, doing recreations and choosing the right friends for discussion. Those preparations can help to reduce stress. They also can seek help from a professional. The ability to manage time well for study, rest, and eating are also necessary in order to complete the thesis on time and to maintain the health. Based on the explanation above, the researcher was interested in conducting research with the title, “The Correlation between Stress Levels and Eating Behavior on The Last Grade Students at Bachelor in Nursing Science Study Program.

METHODE

The type of research used in this study is correlational. This study used cross sectional approach. The population in this study were the last grade students in Bachelor of Nursing Science Study Program with the total number of 92 students. This sampling method used total sampling technique so that the sample was found as many as 92 students. The instrument used in data collection was a questionnaire to measure stress level and eating behavior. The measuring tool used DASS 42 (Depression Anxiety Stress Scale) to measure stress levels and DEBQ (Dutch Eating Behavior Questionnaire) to measure eating behavior. This study uses Spearman rank correlation test (with a significance level of $\alpha = 0.05$) to determine and measure the strength of

the relationship between indicators. Researchers used the SPSS (Statistical Package for Social Science) version 25 for Windows to perform the Spearman rank correlation test.

RESULT

Table 1. The characteristics of the respondents

Variable		Total	Presentation
		n=92	%
Age	Teenager	91	99
	Adulthood	1	1
Gender	Female	73	79
	Male	19	21
Parent's profession	Retirement	88	96
	Working	4	4
Tribe	Madurese	3	3
	Balinese	20	22
	Buginese	1	1
	Malay	1	1
	Javanese	65	71
	Osingnese	2	2
	Religion	Islam	76
	Hindu	15	16
	Budha	1	1
Current residence	Home	39	42
	Dormitory	6	7
	Boarding house	46	50
	Rented house	1	1

Based on table, most of respondents are teenager with the total numbers of 91 respondent (99%), almost entirely of respondents are female with the total number of 73 respondents (79%), respondents' parents almost entirely are still working, with the total number of 88 respondents (96%), most of respondents are Javanese, with the total numbers of 65 respondents (71%), respondents' religion almost entirely is Islam with the total number of 76 respondents (83%) and half of respondents live at boarding house with the total number of 46 respondents (50%).

Table.2 Stress levels of the respondents

Variable	Frequency (n=72)	Percentage (%)
Normal	21	23
Mild	8	9
Moderate	26	28
Severe	32	32
Extremely Severe	5	5

Based on the table, almost half of the respondent suffered from severe stress with the total number of 32 respondents (35%).

Table 3. Eating behavior of the respondents

Variable	Frequency (n=72)	Percentage (%)
Low	21	23
Moderate	58	63
High	13	14

Based on the table, most of respondent experience moderate eating behavior with the total number of 58 respondents (63%).

Level Stress	Eating Behaviour						Total (%)	P-value
	Low		Moderate		High			
	n	%	n	%	n	%		
Normal	14	15	7	8	0	0	21(23)	0,000
Mild	5	5	3	3	0	0	8 (9)	
Moderate	1	1	21	23	4	4	26 (28)	
Severe	1	1	24	26	7	8	32 (35)	
Extremely Severe	0	0	3	3	2	2	5 (5)	
Total	21	23	58	63	13	14	92 (100)	

Table 4. The Correlation between Stress Levels and Eating Behavior

Table 4, the results that were obtained from 92 respondents showed 32 respondents (35%) experienced severe stress, and 54 respondents (63%) experienced moderate eating behavior. The results of the Spearman rank test analysis (Appendix 15) obtained P-value of 0,000 which means (P < 0,05) with $\alpha = 0,05$. The results obtained significant research results (2-tailed) $0,000 < 0,05$. It can be concluded that this research hypothesis (Ha) was accepted and it can be interpreted that the two variables have a significant correlation and H0 was rejected. There was correlation between stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences study program in preparing their thesis

DISCUSSION

The Correlation between Stress Levels and Eating Behavior on The Last Grade Students of Bachelor in Nursing Sciences Study Program.

Based on the results of the Spearman rank test analysis using SPSS 25 for Windows with a significance level of 0.05 (5%), the value obtained was 0.000 that was less than 0.05. Thus, the alternative hypothesis was accepted and H_0 was rejected, meaning there was correlation between stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences study program in preparing their thesis.

Based on the results of the cross tabulation in table 4 about stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences study program in preparing their thesis it showed that almost half of the respondents, 24 respondents (26%), suffered from severe stress and experienced moderate eating behavior. This research is in line with research performed by Gryzela (2019).

Stress is a disorder of the body and mind caused by the changes and demands of life (Vincent Cornelli, in Jenita DT Donsu, 2017). According to Charles D. Speilberger, stress is an external demand that hits a person. It is such as an object in the environment or a stimulus that is objectively harmful. Stress can be interpreted as pressure, tension, unpleasant disturbances that come from outside a person (Jenita DT Donsu, 2017).

Van Strein et al. in Sonya (2019) explained Eating behavior in psychosomatic theory, externality, and restraint. The psychosomatic theory explains that individuals will eat excessively in response to negative emotions. The theory of externality explains that individuals eat when they do not feel hungry or full, but because of a response related to the stimulus from the food. The theory of restraint is when individuals limit the food that enters the body to maintain body image, lose weight, and to keep the weight from gaining.

According to researcher assumption, the result of this study showed that stress and eating behavior on the last grade students of Bachelor in Nursing Sciences study program in preparing their had quite strong correlation. Stress is a condition when individuals feel demands from the environment that exceed their capacity so that psychological and biological changes can affect them and their habits. Stress levels were divided into normal stress, mild stress, moderate stress, severe stress, and extremely severe stress. The stress questionnaire consisted of 14 questions. The mechanism of coping with stress for each individual is certainly different, but many individuals experience changes in eating behavior when stressed.

Stress levels with eating behavior can be influenced by factor of age, gender, current residence, and writing in thesis. In this research result, the higher the stress level, the higher the eating behavior of an individual. Vice versa, the lower the individual's stress level, the lower the eating behavior. However, it is possible that there is a high level of stress and high eating behavior as described in the cross-tabulation table 4, it obtained that there were 26 respondents (26%) who had high level of stress and eating behavior. It is because the respondent is working on a thesis, causing them to experience stress and affect their eating behavior. These results explained the correlation between stress levels and eating behavior. Stress can create the feelings of hunger not only in the mind. On the other hand, there are also some people when they are stressed out, they will eat little or not eat any food at all. This research is in line with the research performed by Gryzela (2019).

CONCLUSION

This study can be concluded that there was a relationship between level stress and eating behavior on the last grade students of Bachelor in Nursing Sciences Study Program in Preparing Their Thesis. The results of this study are expected to be used as materials as one of the reflection efforts especially to students who are

working on their thesis. They can control their eating behavior when they feel stress and they can prevent the negative impact of eating behavior.

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