CHAPTER 1

INTRODUCTION

1.1 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 at STIKES Banyuwangi, 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 STIKES Banyuwangi 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 in STIKES Banyuwangi in Preparing Their Thesis in 2022".

1.2 Problem Formulation

Based on the previous description, the problem formulation of this search is, "Is there any correlation between stress levels and eating behavior on the last grade students at Bachelor in Nursing Science study program in STIKES Banyuwangi in preparing their thesis in 2022?"

1.3 The Objective of Study

Based on the above problem formulation, the objectives to be achieved in this research are:

1.3.1 General Aim

To identify the correlation between stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences study program for preparing their thesis at STIKES Banyuwangi in 2022.

1.3.2 Specific Aim

1. To identify Stress Levels on The Last Grade Students of Bachelor in Nursing Sciences Program for Preparing Their Thesis at STIKES Banyuwangi in 2022.

2. To identify Eating Behavior on The Last Grade Students of Bachelor in Nursing Sciences Program for Preparing Their Thesis at STIKES Banyuwangi in 2022.

3. To analyze the Correlation between Stress Levels and Eating Behavior on The Last Grade Students of Bachelor in Nursing Sciences Program for Preparing Their Thesis at STIKES Banyuwangi in 2022.

1.4 Expected Result

Based on the research objective to be achieved, the expected results of this research are:

1.4.1 Theoretical

Contributing to the field of health, improving, and developing knowledge especially in the field of nursing, Getting information about stress levels and eating behavior can become input for future researchers.

1.4.2 Practical

1. Respondent

   The results of this study are expected to be used as materials as one of the reflection efforts especially for students who are working on their thesis so that they can control their eating behavior when they feel stress thus negative impact of eating behavior does not appear.

2. Researchers

   Increasing knowledge and abilities of researchers both of concept and theories to developing nursing research.

3. Science and Technology

   A consideration as a library material for other researchers who will conduct a similar study, namely the correlation between stress levels and eating behavior on the last grade students in preparing their thesis.

4. Community

   Become literature to increase knowledge about stress levels and eating behavior of the last grade students in preparing their thesis

and can be used as input to improve the quality of health, especially

psychiatric nursing.

CHAPTER 2

LITERATURE REVIEW

2.1 Overview of College Student

2.1.1 Definition of College Student

Students are individuals who are studying at the tertiary level, both public and private universities or institutions at the level of universities. Students themselves are seen as having a high level of intelligence, intelligence in thinking and planning in acting (Papilaya & Huliselan, 2016).

Students are students at the tertiary level, while according to KBBI students themselves are students who study in tertiary institutions (Wulan & Abdullah, 2014).

Students are considered to have a high level of intelligence, intelligence in thinking and planning in action. Critical thinking and acting quickly and appropriately are traits that tend to be inherent in every student (Triwantoro, 2018).

A student is categorized as a developmental stage whose ages are 18 to 25 years. This stage can be classified from late adolescence to early adulthood and in terms of development at the age of this student has established a life stance (Triwantoro, 2018).

2.1.2 College Student Rights and Obligations

In Government Regulation Number 60 of 1999 concerning Higher Education Chapter X Article 109, it is stated that the rights of college students are as follows:

a. Students have the right to use academic freedom responsibly to study in accordance with the norms and ethics that apply in the academic environment.

b. Students have the right to get the best teaching and academic services in accordance with the interests, talents, hobbies and abilities of the students concerned.

c. Students have the right to use higher education facilities in order to facilitate the learning process.

d. Students have the right to obtain guidance from lecturers who are responsible for the study program they are participating in in completing their studies.

e. Students have the right to obtain information services related to the study program they are participating in and their learning outcomes.

f. Students have the right to finish their studies earlier than scheduled determined in accordance with applicable requirements.

g. Students have the right to obtain welfare in accordance with applicable laws and regulations.

h. Students have the right to participate in the activities of the university's student organization concerned.

i. Students have the right to special services if they have a disability.

Student obligations contained in Government regulation Number 60 of 1999 concerning Higher Education Article 110 are as follows:

a. Students are obliged to comply with all regulations or conditions that apply to the university concerned.

b. Students are obliged to participate in maintaining the facilities and infrastructure as well as the cleanliness, order and security of the university concerned.

c. Students are obliged to share the costs of providing education, except for students who are exempt from this obligation in accordance with applicable regulations.

d. Students are obliged to respect science, technology or art.

e. Students are obliged to maintain the authority and reputation of the university concerned.

f. Students are obliged to uphold the national culture.

2.1.3 College Student's Role and Function

As a student, students carry various labels, there are several kinds of labels attached to students (in Novita, 2014) for example:

a. Direct of change, students can make changes directly because of the large number of human resources.

b. Agents of Change, students are agents of change, meaning human resources to make changes.

c. Iron Stock, the human resources of the students will never run out.

d. Moral Force, students are a group of good people.

e. Social Control, students are controllers of social life, for example controlling the social life of the community.

2.1.4 The Last Grade of College Students

The last grade students are identical to final assignments or thesis. To complete the study period, students are required to work on a thesis. Thesis is a scientific work that is the result of research carried out with the correct methods and procedures in order to obtain a bachelor's degree in education (Yulianto in Broto, 2016).

According to Asrun, Herik, and Sunarjo (2019), the last grade students are students who are working on a thesis for the graduation requirements that must be taken by students in completing their studies and the requirements for obtaining a bachelor's degree. At university, students want to study theories and take credits semester by semester depending on the majors they choose. At the final stage and having reached the number of credits that are used as prerequisites for taking the next stage, students will enter the final session in the world of lectures, which is the final project or what is called a thesis (Roelyana & Listiyandini, 2016).

Thesis is one of the requirements set by each Study Program, Faculty or University which is a demand from the curriculum formulation that has been implemented. Thesis is a requirement that must be met by every the last grade student in order to get a bachelor's degree. Therefore, students must be able to make certain targets to account for their final assignments to their supervisors and examiners. The problem that usually arises when working on a thesis is that students feel confused. Confusion that is usually

experienced is for example in the form of students having difficulty with what he wrote and he discussed in the thesis, then experiencing obstacles when they want to pour what is on their mind into writing (Machmud, 2016).

2.2 Overview of Stress

2.2.1 Definition of Stress

Stress can be defined as any type of change that causes physical, emotional, or psychological strain. Stress is your body's response to anything that requires attention or action (Scott, 2020).

In a medical or biological context stress is a physical, mental, or emotional factor that causes bodily or mental tension. Stresses can be external (from the environment, psychological, or social situations) or internal (illness, or from a medical procedure). Stress can initiate the "fight or flight" response, a complex reaction of neurologic and endocrinology systems (Davis, 2021).

Stress is the process by which an individual or a person react when opened to external or internal problems and challenges. Stress has direct effect on the brain and the whole anatomy of body as such failure to adapt to a stressful condition can result in brain malfunction and physiological problem (Essel & Owusu, 2017).

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 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).

From the explanation above, it can be concluded that stress is an unbalanced condition between a person's source of stress and demands charged arising from interactions with the environment so that perceived to be threatening it person which was ultimately responded by physical, behavioral, mind, and psychology.

2.2.2 Factor Affecting The Occurrence of Stress

When viewed from the cause of stress, according to Sri Kusmiati and Desminiarti, it can be classified as follows (Musradinur, 2016):

a. Physical Stress

Physical stress caused by a temperature that is too high or low, a very loud sound, a light that is too bright, or being electrocuted by an electric current.

b. Chemical Stress

Chemical stress caused by strong acids and bases, drugs, toxic substances, hormones, or gases.

c. Microbiological Stress

Microbiological stress caused by viruses, bacteria, or parasites

d. Physiological Stress

Physiological stress is caused by disturbances in the structure, function of tissues, organs, or systemic causing abnormal bodily functions.

e. Stress of Growth and Development Process

This is due to impaired growth and development in infancy to old age.

f. Psychological/Emotional Stress

This stress is caused by disturbances in interpersonal, social, cultural, or religious relationships.

Stress factors (stressors) are all matters that may cause a person to feel depressed. An individual assessment of stressors can affect people to do so in opposition to stressors which can create pressure. The reasons of pressure may be biological, physical, psychological, and spiritual (Safaria & Saputra, 2018).

a. Biological stressors can be in the form of: microbes, bacteria, viruses and other microorganisms, animals, animals, various plants and other living things that can affect health.

b   Physical stressors can be in the form of climate change, nature, temperature, weather, geography, which has the location of residence, domicile, demography, number of family members, nutrition, radiation, population density, immigration, and noise.

c. Chemical stressors can be in the form of: drugs, medication, alcohol use, environmental pollution, cosmetic ingredients, and preservatives.

d. Social psychological stressors can be in the form of: prejudice, dissatisfaction with oneself about something expirienced, cruelty,

role conflict, low self-esteem, academic, economic changes, negative emotions and pregnancy.

e. Spiritual stressors can be in the form of: negative perceptions of divine values (Rasmun, 2016).

Rindang in Triyana (2015) explains the factors that affecting stress in writing a thesis, including:

a. Internal factors

1) Gender

Research in the United States states that women tend to have higher stress levels than men. In general, women experience 30% more stress than men.

2) Student personality characteristics

There are differences in the personality characteristics of students who currently compiling a thesis causing a different reaction to the same stressor. Students who have strength personality has higher resistance to stress sources than students who do not have strength personality.

3) Intelligence

Students who have a higher level of intelligence will be more resistant to sources of stress than students who have low intelligence, because the level of intelligence is related to adjustment. Students who have high intelligence tend to be more adaptive in adjusting themselves.

b. External factors

1) Job demands or academic assignments

Thesis is considered heavy and not in accordance with individual abilities can cause stress.

2) Student relations with the social environment

Received social support and integration in interpersonal relationships with the social environment.

3) Family factor

The stress factor experienced by individuals caused by unfavorable family conditions is the attitude of parents.

4) Tribe and culture

Different cultures are able to build the personality in each individual.

5) Socio-economic status

People who have low socioeconomic status tend to have high stress levels. Low income causes economic difficulties so that it often causes pressure in life.

6) Student coping strategies

Coping strategies are a series of responses that involve elements of thinking to overcome everyday problems and sources of stress related to demands and threats that come from the surrounding environment. Coping strategies used by students who are compiling their thesis in dealing with stress have an effect on their stress level.

2.2.3 Symptom of Stress

Based on University of Regina - Counseling Services Role in Nur & Mugi (2021). These symptoms have been categorized according to physical, emotional, mental, spiritual, or relational traits.

a. Physical

The symptoms of stress according physical such as; appetite change, tightness in neck upset, stomach, pounding heart accident proneness, cold feet and hands sweating, unexplained choking feeling fatigue, teeth grinding constipation, chills restlessness, back pain memory loss, muscle tension difficulty sleeping, blurred vision, diarrhea, chest pain rashes, twitching word loss, breathing difficulties headaches, premature aging nausea, overeating colds, violent behaviour, staring into space for extended period of time, drinking alcohol or using drugs to change your mood.

b. Emotional

The symptoms of stress according emotional such as; frustration, depression, mood swings, quick to anger, nightmares, irritability, easily discouraged, little joy, worrying, imagining the worst, feeling overwhelmed, forgetfulness, nervousness, defensiveness, fear, grief anger, and anxiety.

c. Mental

The symptoms of stress according mental such as; difficulty solving problems, difficulty making decisions, difficulty concentrating, difficulty calculating, negative self-talk, negative attitude, denial:

believe nothing is wrong, regularly criticize and complain, withdrawal: avoid situations, catastrophize, and overly suspicious.

d. Relational

The symptoms of stress according relational such as; isolation, intolerance, resentment, loneliness, lashing out, hiding, clamming up, sexual problems, distrust, fewer contacts with friends, and lack of intimacy.

e. Spiritual

The symptoms of stress according spiritual such as emptiness, loss of meaning, doubt, unforgiving, and loss of direction.

Straw & Cary (2014) suggested that symptoms of stress can include the following signs:

a. Physical, namely rapid breathing, dry mouth and throat, moist hands, feeling hot, tense muscles, disturbed digestion, constipation, more unreasonable, headache, whiplash and restlessness.

b. Behavior, namely feelings of confusion, anxiety, sadness, restlessness, misunderstanding, helplessness, loss of enthusiasm, difficulty concentrating, and so on.

c. Character and personality, namely excessive caution, panic, lack of confidence, irritation.

2.2.4 Sources of Stress

Andreasen and Black in Musradinur (2016) Something that is an effect must have a cause or what is called a stressor, as well as stress, a person can be stressed because he encounters many problems in his life. As stated

above, stress is triggered by stressors. Of course, the stressor comes from various sources, namely:

a. Environment

Included in the environmental stressors here are:

1) Environmental attitudes, as we know that the environment has negative and positive values for the behavior of each individual according to the understanding of the group in that society. This demand can make the individual must always act positively according to the views of the community in the environment.

2) Family demands and attitudes, for example, such as demands that are in accordance with the wishes of parents to choose a major when going to college, matchmaking and others that are contrary to their wishes and cause pressure on the individual.

3) The development of Science and Technology, the demand to always be updated with the times makes some individuals compete to be the first to know about new things, these demands also occur because of a high sense of shame if they are called ignorant.

b. Psychological

1) Psychological needs are demands for the desires to be achieved.

2) The process of self-internalization is an individual's demand to continuously absorb something that is desired according to development.

c. Thought

1) Relating to the individual's assessment of the environment and its effect on self and perception of the environment.

2) Relating to the way of self-assessment about the usual way of adjustment made by the individual concerned.

The causes of stress above certainly will not directly make a person stressed. This is because everyone is different in responding to every problem they face, besides that the stressor that causes it can also affect stress.

2.2.5 Types of Stress

According to the American Psychological Association, three types of stress; acute stress, temporary acute stress, and chronic stress can make us all anxious or even ill, but chronic stress is often ignored (American Psychological Association, 2014).

a. Acute Stress

A disabling psychological condition that can occur immediately after exposure to a traumatic stressor. Symptoms such as intrusive thoughts, hyperarousal, and avoidance of situations that recall the traumatic event are the same as those of posttraumatic stress disorder but do not last longer than 4 weeks. This disorder may also include

elements of dissociation, such as depersonalization and derealization.

b. Episodic Acute Stress

Episodic acute stress is when a person experiences acute stress frequently. It may feel like always under pressure or that things are always going wrong. This can be exhausting, both physically and mentally. Experiencing episodic acute stress symptoms may affect the way people behave towards others. Left untreated, episodic acute stress can lead to irritability, unintended hostility, and relationship problems. Experiencing episodic acute stress may indicate the need to make some lifestyle changes.

c. Chronic Stress

Chronic stress is the physiological or psychological response to a prolonged internal or external stressful event (i.e., a stressor). The stressor need not remain physically present to have its effects. recollections of it can substitute for its presence and sustain chronic stress.

According to Jenita DT Donsu (2017), stress is generally divided into two, namely:

a. Acute Stress

Stress is known as the fight or flight response. Acute stress is the body's response to certain threats, challenges, or fears. The acute stress response is immediate and intense in some circumstances, causing tremors.

b. Chronic Stress

Chronic stress is stress that is more difficult to separate or deal with, and its effects are longer and longer-lasting.

According to Lumongga (in Sukoco, 2014) this type of stress can be divided into two types, namely:

a. Distress

Distress is a type of negative stress that interferes with individuals who experience it.

b. Eustress

Eustress is a type of stress that is positive or constructive. Individuals who experience stress have several symptoms or images that can be observed subjectively or objectively

2.2.6 Impact of Stress

Stress can play a part in problems such as headaches, high blood pressure, heart problems, diabetes, skin conditions, asthma, arthritis, depression, and anxiety (Jenita DT Donsu, 2017).

According to Priyoto (2014) the impact of stress is divided into 3 categories, namely:

a. Physiological impact

1) Hyperactive body organs in one particular system disorder

a) Muscle myopathy: certain muscles tighten / weaken.

b) Blood pressure rises: damage to the heart and arteries.

c) Digestive system: ulcer, diarrhea.

2) Reproductive system disorders

a) Amenorrhea: retention of menstruation.

b) Failure to ovulate in women, impotence in men, lack of production semen in men.

c) Loss of sexual desire.

3) Other disorders, such as dizziness (migrane), muscle tension, boredom, etc.

b. Psychological impact

1) Burnout is the first sign and plays a central role in burn-out.

2) Emotional exhaustion or exhaustion.

3) Decreased personal achievement, resulting in decreased sense of competence and sense of success.

c. Behavioral impact

1) When stress becomes distress, learning achievement decreases and often occurs behavior that is unacceptable to society.

2) A high enough stress level has a negative impact on abilities remember information, make decisions, take appropriate steps.

3) Severe stress often skips a lot or doesn't actively follow learning activities, such as acting impulsively or acting as they please, loss of appetite, or excessive appetite.\

2.2.7 Phases of Stress

Hawari (2014) gives the following stress phases:

a. Stress Phase I

This stage is the mildest stress stage and is generally accompanied by the following feelings:

1) The enthusiasm for work is great, overreacting.

2) Unusually "sharp" eyesight.

3) Feeling of being able to work more than usual, but without noticing it, the energy reserves (fully utilized) are used up, accompanied by excessive nervousness.

4) Feeling happy with his job and getting more enthusiastic, but it can be realized that the energy reserves are running low.

b. Stress Phase II

In this stage, the impact of stress that was previously "pleasant" as described in stage I begins to disappear, and complaints arise due to insufficient energy reserves throughout the day due to insufficient time to rest. Complaints often found by someone who is in stage II stress are as follows:

1) Feeling tired when wake up in the morning.

2) Tired easily.

3) Often complains of stomach or bowel discomfort.

4) Heart palpitations.

5) The back and neck muscles feel tense.

6) Cannot relax.

c. Stress Phase III

If the person continues to assert themselves in their situation or work regardless of the complaints described in stress phase II above, then the person concerned shows more real and worrying complaints, namely:

1) Stomach and intestinal disorders (gastritis, diarrhea, constipation).

2) Increasing muscle tension.

3) Feelings of restlessness and emotional tension are increasing.

4) Insomnia.

d. Stress Phase IV

If this happens and the person continues to force themselves with their situation, the symptoms of stage IV stress appear as follows:

1) Not able to work all day.

2) Activities will be difficult and tiring.

3) Inadequate response, disrupted routine activities.

4) Disorders of sleep patterns.

5) Often refuse invitations because they are not excited.

6) Concentration and memory decline.

7) Fear and anxiety arise.

e. Stress Phase V

Stress stages are characterized by physical and mental fatigue, namely:

1) Inability to complete simple and light work.

2) Easily confused and panicked.

3) Indigestion is getting worse.

4) Increased fear and anxiety.

f. Stress Phase VI

This is the climax stage of a person experiencing panic attack and fear of death, the description of stress at this stage is as follows:

1) Heart pounding hard.

2) Shortness of breath.

3) Lack of energy for light things.

4) Body shaking, cold, and sweating.

5) As well as fainting easily.

When examined, the complaints or symptoms as represented higher than are additional dominated by physical complaints caused by useful disorders of the body organs as a result of psychosocial stressors that exceed one' ability to handle them.

2.2.8 Levels of Stress

Stress levels can be divided into five Perry Potter in Sarifhatul (2017):

a. Normal Stress

Normal stress is a natural part of life, for example when heart beating faster after an activity that might be homework, fear of failing an exam.

b. Mild stress

Mild stress could be a stressor placed frequently such as an excessive amount of sleep, traffic jams, and criticism from superiors. This case is simply some minutes or hours. The stressors aren't a major risk for symptomatic symptoms. However, multiple light-weight stressors over a short amount of time can increase the chance of disease. Symptoms of mild stress are cold and wet skin, normal blood pressure, palpitations and tight muscles.

c. Moderate Stress

Stressful situations last longer from several hours to several days for example, an unresolved dispute with a coworker, a sick child. sometimes experiencing stress: changes in diet, raised blood pressure, increased breathing, indigestion and fatigue.

d. Severe Stress

Stressful situations can last from a few weeks to several years such as persistent marital strife, prolonged financial difficulties, and long-term physical illness. The more frequent and prolonged the stressful situation, the higher the risk of this stress. This stress is very dangerous if you do not care because it can be physically damaging and lead to chronic diarrhea, muscle cramps and physical weakness.

e. Heavy Stress

Stressful situation leads to depression. It can be said to be very severe; this alignment is running continuously without a healing process so it can cause disease risk.

2.2.9 Management of Stress

According to Rahmawati in 2021, stress management is the ability to use resources (humans) effectively to overcome mental and emotional disturbances or disorders that arise due to responses (responses). The purpose of stress management itself is to improve the individual's quality of life for the better (Rahmawati, 2021).

There is another opinion which states that stress management is a program to control or regulate stress which aims to identify the causes of stress and know the techniques of managing stress, so that people are better at dealing with stress in life (Schafer in Rahmawati, 2021).

An important aspect of stress management is the client's ability to cope with it. Coping is an attempt to master a condition that is considered dangerous, threatening, conflict, or challenging. The client's ability to cope with certain situations is influenced by personal characteristics, available resources, situations, and client coping patterns that are developed. Personal characteristics that influence coping include the stage of development, the value and purpose of the proposal, beliefs about self, roles, and responsibilities. The client's perception of similar situation also includes individual characteristics that affect coping (Keliat, 2014).

Coping strategies aim to overcome situations and demands that are felt to be pressing, challenging, burdensome and exceeding their resources. A person's coping resources will affect the coping strategies that will be carried out in solving various problems (Maryam, 2017). Types of coping strategies according to Stuart and Sundeen in Maryam (2017) there are two

types of coping mechanisms that are carried out by individuals, namely problem focused form of coping mechanism/direct action and emotion focused coping/palliative form. Which includes coping mechanisms that centered on the problem are:

1) Confrontation is an attempt to change circumstances or resolve problem aggressively with describe the level of anger as well as risk taking.

2) Isolation, where the individual tries to withdraw from the environment or do not want to know with problems encountered.

3) Compromise, namely changing the situation be careful, ask the family for help close and peers or work together with them.

While the coping mechanisms centered on emotions are as follows:

1) Denial, i.e. rejecting problems with said it didn't happen to himself.

2) Rationalization is using reasons acceptable to reason and acceptable by others to cover his incompetence. With our rationalization can not only justify what we did, but also feel that it is appropriate to do so fairly.

3) Compensation, namely showing behavior to cover incompetence by highlighting good qualities, because frustrated in a field then look for it excessive satisfaction in the field of other. Compensation arises because of feeling of inadequacy.

4) Repression, namely by forgetting the times unpleasant from his memory and only remember the times pleasant.

5) Sublimation is expressing or channel feelings, talents or ability with a positive attitude.

6) Identification, namely imitating ways of thinking, ideas and the behavior of others.

7) Regression is the attitude of someone who returns to the past or act like a child small.

8) Projection, i.e. blaming others for his own trouble or vent blame on others

9) Conversion is transferring psychological reactions to physical symptoms.

10) Displacement is an emotional reaction to someone is then directed to someone else

Coping includes indirect and direct coping patterns. Indirect coping patterns are actions to lessen anxiety because of certain conditions without changing the situation. Direct coping patterns are actions cope with precise conditions. Both forms of coping are similarly useful, however, indirect coping patterns are more temporary and ultimately do not extrude the situation (Keliat, 2014).

Examples of indirect and direct coping patterns (Keliat, 2014) are:

1) Indirect coping pattern

    a. Walking

    b. Swimming

    c. Relaxation techniques

    d. Meditation

e. Recreation with other people

f. Talking with friends

g. Pray or attend religious services

2) Direct coping pattern

a. Using problem-solving skills to solve situations

b. Seek information and use it in action

c. Setting boundaries for yourself and others

d. Using assertive techniques

e. Changing or modifying the situation

There are several therapeutic techniques can be used to reduce stress, including (Setyoadi, 2012):

1) Cognitive therapy

Cognitive therapy could be a short-term, current problem-oriented, personal therapy that aims to relieve symptoms of the disease and helps clients learn effective ways in coping with issues that cause stress.

2) Music therapy

Music therapy could be a health therapy that uses music aim to enhance physical, emotional, cognitive and social conditions for individuals. the kind of music used is customized to the desires of every individual, such as classical music, blues, orchestra, or modern music.

3) Spiritual healing

Spiritual therapy could be a therapeutic approach to beliefs held by clients aims to strengthen the client' mentality and self-concept, restore bad perceptions of their views and might lessen stress.

4) Deep breath relaxation therapy

Deep breath relaxation therapy is slow, rhythmic, comfortable abdominal breathing with closed eyes. This technique could be a methodology to lessen tension and pain, get feeling of relaxation and comfort, reduce anxiety and stress.

2.2.10 Measuring of Stress

Instruments have an important role in a study. Instruments play a role in obtaining data used from a study, for further research and conclusions drawn as research results. In this study, the author uses an instrument or data collection tool with a questionnaire or a questionnaire to measure stress levels. Stress level is the result of an assessment of the severity of stress experienced by a person (Hardjana in Yuliana, 2016). This stress level is measured using Depression Anxiety Stress Scale 42 (DASS 42) by Lovibond (Yuliana, 2016).

The stress levels on the instrument are normal, mild, moderate, severe and extremely severe. Psychometric Properties of The Depression Anxiety Stress Scale 42 (DASS 42) consists of 42 items including:

a. The depression scale is in question numbers: 3, 5, 10, 13, 16, 17, 21, 24, 26, 31, 34, 37, 38, 42

b. The anxiety scale is in question number: 2, 4, 7, 9,15, 19, 20, 23, 25, 28, 30, 36, 40, 41

c. The stress scale is in question numbers: 1, 6, 8, 11, 12, 14, 18, 22, 27, 29, 32, 33, 35, 39

Psychometric Properties of The Depression Anxiety Stress Scale 42 (DASS) consists of 42 items, including 3 subvariables, namely physical, psychological, and behavioral. The Property of The Depression Anxiety Stress Scale 42 (DASS 42) consists of 42 items:

1) (s) I found myself getting upset by quite trivial things

2) (a) I was aware of dryness of my mouth

3) (d) I couldn't seem to experience any positive feeling at all

4) (a) I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)

5) (d) I just couldn't seem to get going

6) (s) I tended to over-react to situations

7) (a) I had a feeling of shakiness (eg, legs going to give way)

8) (s) I found it difficult to relax

9) (a) I found myself in situations that made me so anxious I was most relieved when they ended

10) (d) I felt that I had nothing to look forward to

11) (s) I found myself getting upset rather easily

12) (s) I felt that I was using a lot of nervous energy

13) (d) I felt sad and depressed

14) (s) I found myself getting impatient when I was delayed in any way (eg, lifts, traffic lights, being kept waiting)

15) (a) I had a feeling of faintness

16) (d) I felt that I had lost interest in just about everything

17) (d) I felt I wasn't worth much as a person

18) (s) I felt that I was rather touchy

19) (a) I perspired noticeably (eg, hands sweaty) in the absence of high temperatures or physical exertion

20) (a) I felt scared without any good reason

21) (d) I felt that life wasn't worthwhile

22) (s) I found it hard to wind down

23) (a) I had difficulty in swallowing

24) (d) I couldn't seem to get any enjoyment out of the things I did

25) (a) I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)

26) (d) I felt down-hearted and blue

27) (s) I found that I was very irritable

28) (a) I felt I was close to panic

29) (s) I found it hard to calm down after something upset me

30) (a) I feared that I would be "thrown" by some trivial but unfamiliar task

31) (d) I was unable to become enthusiastic about anything

32) (s) I found it difficult to tolerate interruptions to what I was doing

33) (s) I was in a state of nervous tension

34) (d) I felt I was pretty worthless

35) (s) I was intolerant of anything that kept me from getting on with

   what I was doing

36) (a) I felt terrified

37) (d) I could see nothing in the future to be hopeful about

38) (d) I felt that life was meaningless

39) (s) I found myself getting agitated

40) (a) I was worried about situations in which I might panic and make

   a fool of myself

41) (a) I experienced trembling (eg, in the hands)

42) (d) I found it difficult to work up the initiative to do things

Table 2.1. *Depression Anxiety Stress Scale* 42 (DASS 42) score:

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	>28	>20	>34

Depression Anxiety Stress Scale is a set of subjective scales formed to measures the negative emotional status of depression, anxiety and stress. DASS 42 can be used either by groups or individuals for research purposes. The stress level on this instrument is normal, mild, moderate, severe, and extremely severe. The Psychometric Properties of The Depression Anxiety Stress Scale 42 (DASS) consists of 42 items, which include three sub-variables, physical, psychological, and behavioral. The total score of the statement items, has a meaning of 0-29 (normal), 30-59 (mild), 60-89

(moderate), 90-119 (severe), >120 (extremely severe). DASS 42 also available in bahasa version.

Researchers only selected 14 statements that measured stress levels. The minimum score of this questionnaire related to stress is 0 and the maximum score is 42. The stress level questionnaire consists of 14 statements using a scale of 0, not according to me personally, or never. Scale 1, suits me personally to some degree or sometimes. A scale of 2, suits me personally to a considerate extent or quite often and a scale of 3, is very personal to me, or very often. The score categories in this questionnaire are normal (0-14), mild (15-18), moderate (19-25), severe (26-33), and very heavy (≥34) (Mubarak et al, 2015).
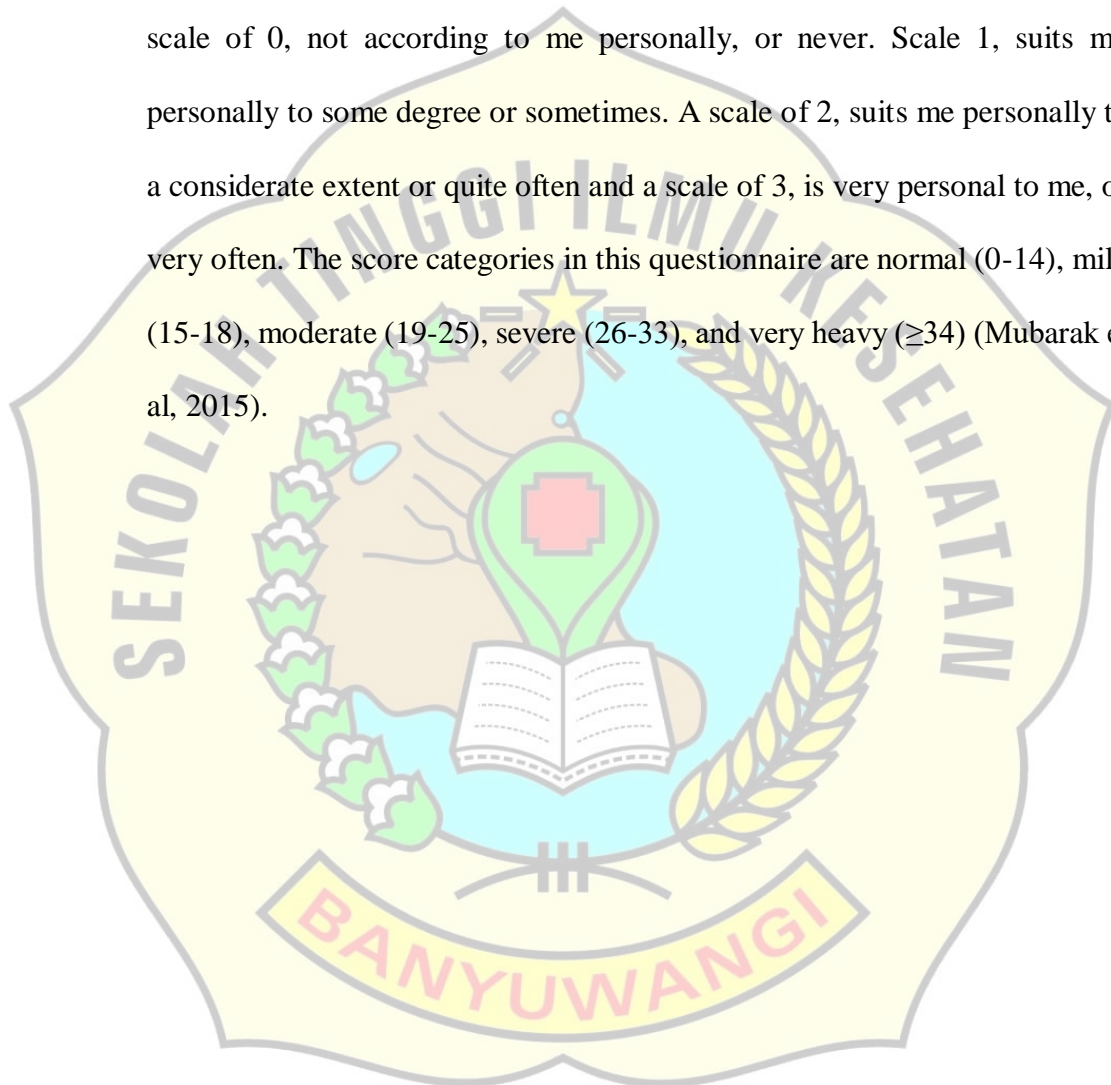
2.3 Overview of Eating Behavior

2.3.1 Definition of Eating Behavior

Eating behavior is a behavior that has been experienced since childhood includes decisions about when, what, how, how much, where, and with whom to eat. Often times when making a decision to eat, it is enough to consider things such as where to eat and what to eat (Fassah and Retnowati, 2014).

According to Grimm and Steinle (2012), eating behavior is a complex interaction of physiological, psychological, social, and genetic factors that affect meal times, quantity of food intake, and food preferences or choices. When individuals choose the food they want to eat, it doesn't just happen, but the individual will determine it.

Eating behavior according to Van Strein et al. in Sonya (2019) explained in psychosomatic theory, externality, and restraint. The psychosomatic theory explains that individuals will eat to excess 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 so that weight does not gain.

2.3.2 Aspects of Eating Behavior

Eating behavior according to Van Strein et al in Sonya (2019) has three aspects, namely:

a. Emotional Eating

Individuals will overeat when faced with high emotions. Individuals will consume foods that are high in calories and associated with body fat (Zellner et al. in Sonya, 2019). Emotional eating is the urge to eat when a negative response appears, such as depression and despair (Streint, 2013).

Emotional eating is a tendency to overeat in response to negative emotions or inadequate and ineffective coping with stress (Ganley in Sukianto, 2019). Emotional eating that is carried out continuously can affect improper eating patterns, weight, and health (Ozieret al., in Sukianto, 2019). Another factor that affects the nutritional status is diet. Inappropriate eating patterns are a trigger for obesity (Rumajar, 2015).

b. External Eating

External eating is an individual response to food stimuli that include sight, smell and taste of food regardless of hunger and satiety. Some people prefer food based on a strong response to an external stimulus such as sight or taste rather than an internal signal such as hunger (Schachter, Goldman, & Gordon in Tsaqila, 2018).

c. Restraint Eating

The statement revealed by Snoek in Tsaqila (2018) states restraint eating focuses on the psychological side effects of dieting that result in a tendency to overeat if don't limit the number of meals. Individuals consciously refrain from eating in order to lose or

maintain weight. Also, that a person who skips meals causes irregular eating patterns and counter-regulation occurs when the person no longer wants to hold back on eating, causing the person to eat as much as possible, and gain weight.

2.3.3 Factor Affecting The Occurrence of Eating Behavior

According to Deliens, Clarys, Bourdeau Dhuij, and Force (2014), eating behavior is influenced by several factors, including:

a. Individual factor

1) Food preferences (taste)

Taste is an important factor influencing individuals in making choices about their food. Sometimes, taste also makes individuals eat healthy or unhealthy foods. Taste can make students eat unhealthily; however, it can help them make healthy choices as well. Students are willing to spend quite a lot of money to get food that tastes like it can arouse the appetite.

2) Self-discipline

Self-discipline is related to self-dependency (autonomy) and may have an influence on eating behavior. Individuals have the freedom to choose the food to be eaten by them. Some individuals can choose their food carefully if they have good self-discipline.

3) Values, norms, beliefs (ethical, moral)

Norms and values as well as personal beliefs can influence students' eating behavior. When individuals comply with

existing values and norms and have good self-confidence, the individual will have good eating behavior.

4) State of mind (stress)

Individuals when under stress conditions have two choices. Tend to have healthy or unhealthy eating habits. The stress experienced by students can occur when faced with the lessons they first learned and when they will face exams.

5) Body image and self-concept

When individuals don't find themselves attractive, consequently they think others will think the same. That's a vicious circle and it keeps getting worse and worse. And this can influence someone's eating behaviour.

6) Dietary knowledge

A certain dietary knowledge is needed to be able to make changes in one's eating pattern. Individuals have the awareness to choose foods that are good or bad for health.

7) Time and convenience

Time looks to be a really precious issue once talking about student eating practices. Students indicated they might rather spend time on doing task than cooking, particularly once they have to cook just for themselves. Usually cooking and preparing food takes longer than eating it.

8) Daily rhythm/structure

Individuals living alone have unstructured sleep habits. Often sleeps late at night because of the many tasks that must be done.

9) Past eating habits

Eating habits in the past when individuals were children and adolescents. If the individual has regular eating habits, then as adults also have regular eating habits.

10) Physical activity level

Individuals who exercise regularly spend a lot of energy, so they tend to have the desire to eat whatever they want after exercising.

11) Metabolism

Metabolism can be differing between one another. Some students tend to 'burn' calories more easily than others.

12) Vitality

When individuals experience fatigue, individuals tend to eat high-energy foods.

b. Social environment

1) Parental control

Parental control has a great impact. Individual eating behavior can be controlled by their respective parents.

2) Home education

Eating behavior may depend on individual home education, if individual is raised in a healthier environment will lead to healthy eating behavior as well.

3) Social support

Social support such as friends and family can influence individuals eating behavior.

4) Peer pressure

Group or peer pressure can be an influencing factor of individual food choices.

c. Physical environment

1) Availability and accessibility of (healthy) foods and cooking supplies

Availability, accessibility of food, and cooking supplies on campus, if they can be accessed easily, they will be chosen by him. If healthy food is available, then individuals will tend to choose healthy foods over unhealthy foods.

2) Appeal of foods

Appeal of food items sometimes hard for individuals to make healthy choices

3) Food prices (cost)

Food product prices and individual budget influence students' food choices. Unhealthy food costs much less than healthy food.

Especially, when the individual lives alone the price of food is very important.

d. Macro environment

1) Policy and legislation

Policies and legislation will influence individual eating behavior such as policies on alcohol consumption.

2) Socio-cultural norms and values

Socio-cultural norms and values in a region must be different and can also change over time.

3) Media and advertising

Media and advertising can influence individuals to buy food.

e. University characteristics

1) Residency

A place where there are friends around the same age has a desire to cook food together and eat healthy food.

2) Student societies

Individuals who are members of a certain community will have the same eating behavior as their community.

3) University lifestyle

Individuals who are members of a certain community will have the same eating behavior as their community.

4) Exams

Eating behaviors during the academic year can differ (in a positive and a negative way) from those during exam periods

2.3.4 Criteria of Healthy Food

According to Irianto in Nelvi (2015), there are 10 criteria for healthy food, namely:

a. Enough Quantity

The amount of food eaten by each person depends on the weight, gender, age, and type of activity of the person. For example, student sportsmen certainly need more food intake than ordinary students.

b. Proportional

The amount of food consumed is in accordance with the proportion of a balanced healthy diet, namely 60% carbohydrates, 25% fat, 15% protein, and sufficient vitamin, water and mineral.

c. Enough quality

It is necessary to consider the quality of food, such as proportionate levels, taste, and appearance.

d. Healthy and Hygienic

Food must be sterile or free from disease germs. One of the ways to sterilize the food is by washing it clean and cooking it to a certain temperature before consuming it.

e. Fresh food and not supplements

Fresh vegetables and fruits are healthier than factory foods, junk food, or fast food.

f. Plant-based foods are healthier than animal-based foods

g. Not too long in cooking

For example, vegetables that are boiled for too long at a high temperature actually cause the loss of vitamins and minerals in the vegetables.

h. Orderly in serving

Meals are served regularly every day. Don't get used to eating if you have time because it can cause digestive disorders, such as heartburn or bowel movements are not smooth.

i. Frequency of eating 5 times a day

For example, 3 main meals (morning, lunch, and dinner) and 2 snacks. Remember, the food consumed is still adjusted to the stomach capacity.

j. Drink 8 glasses of water a day

The body needs 2550 liters of water per day. Water needs are obtained through food as much as 100 ml, metabolic waste as much as 350 ml, and comes from drinking water as much as 1200 liters (8 glasses). For that, it is recommended to drink as much water as a glass of water equivalent to 1200 liters.

2.3.5 Impact of Eating Habits

The food we eat will reflect our lifestyle, as well as our eating behavior. Our eating behavior will reflect our lifestyle. A person's eating behavior will have an impact on his health or body. There are two types of eating patterns, namely healthy eating patterns and unhealthy eating patterns. The two diets also have different effects. Healthy eating patterns

are eating behaviors that enable people to achieve complete states of physical, mental, and social well-being and not merely the absence of disease or social infirmity (WHO, 2020). An unhealthy eating is a person's eating behavior that allows a person to. The impact of eating behavior, namely:

a. Impact on the physical condition

    A person's physique is closely related to one's posture, obesity is one of the problems with one's posture. Obesity is associated with physical problems, and a number of psychosocial problems including body dissatisfaction and eating disorders. People with obesity are often faced with social bias, prejudice and discrimination (Chan et al. in Luberizky, 2012)

b. Impact on mental state

    A good mental state is also influenced by good food consumed. Someone who eats healthy food is able to control their emotions as much as 58%. Healthy food will increase the effectiveness of nerve cells that regulate mood, anger and help regulate one's appetite (Swenny in Luberizky, 2012). Meanwhile, unhealthy eating behavior will make it difficult for someone to control their emotions.

c. Impact on state of health

    A healthy diet will have a positive impact on health somebody. A person who has healthy eating behavior will reduce the risk of various diseases including diabetes, heart disease and cancer (Lobstein et al., in Luberizky, 2012).

2.3.6 Management of Eating Behavior

Against the background of imprecise physiological control of energy intake in relation to expenditure, there has been a recognition of the critical role played by dieting and dietary restraint in influencing human eating behavior. Weight loss or the avoidance of weight gain can be achieved through the deliberate control of food intake.

According to Cleve and Clinic in 2020, these are how to manage eating behavior:

a. Don't skip meals.

b. Do plan meals and snacks ahead of time.

c. Do keep track of your eating habits.

d. Do limit night eating.

e. Do drink plenty of water.

f. Do delay/distract yourself when experiencing cravings.

g. Do exercise instead of eating when you are bored.

h. Do be attentive when you eat. Don't eat while watching TV, working, driving or standing.

i. Do only eat in certain settings (kitchen table).

j. Do watch your portion sizes.

k. Do allow yourself to eat a range of foods without forbidding yourself a particular food.

l. Do give yourself encouragement.

m. Do look for a support person to help you stay motivated and accountable.

n. Do be gentle with yourself! Try not to beat yourself up when you lapse.

o. Do think of eating healthfully as a lifestyle change.

p. Do use the scale mindfully. Weigh yourself no more than once a week.

q. Do make healthy food choices.

2.3.7 Measuring of Eating Behavior

In several studies there are several measuring tools used to measure unhealthy eating behavior, namely:

a. The Eating Attitude Test (EAT-26) developed by Garner and Garfinkel, consists of 40 items designed to measure several aspects, namely assessing current attitudes, behaviors and traits have eating disorders, especially anorexia nervosa and bulimia nervosa.

b. The Eating Disorder Inventory (EDI) by Garner, Olmsted, and Polivy, which consists of 64 items. The instrument measures several aspects including drive for thinnes, bulimia, body dissatisfaction, ineffectiveness, perfectionism, interpersonal distrust, interoceptive awareness, maturity fears.

c. Dutch Eating Behavior Questionnaire (DEBQ) developed by Van Streint et al. Consists of 33 items that measure 3 aspects, namely emotional eating, restraint eating and external eating.

The researcher decided to use the scale developed by Van Streint et al., namely the Dutch Eating Behavior Questionnaire (DEBQ) of 33 items.

The scale of unhealthy eating behavior was proposed by Van Streint which includes emotional eating, restraint eating, and external eating.

The Instrument of The Dutch Eating Behavior Questionnaire (DEBQ) consists of 33 items:

Restrained eating

1. If you have put on weight, do you eat less than you usually do?

2. Do you try to eat less at mealtimes than you would like to eat?

3. How often do you refuse food or drink offered because you are concerned about your weight?

4. Do you watch exactly what you eat?

5. Do you deliberately eat foods that are slimming?

6. When you have eaten too much, do you eat less than usual the following days?

7. Do you deliberately eat less in order not to bccomc heavier?

8. How often do you try not to eat between meals because you are watching your weight?

9. How often in the evening do you try not to eat because you are watching your weight?

10. Do you take into account your weight with what you eat?

Emotional Eating

11. Do you have the desire to eat when you are irritated?

12. Do you have a desire to eat when you have nothing to do?

13. Do you have a desire to eat when you are depressed or discouraged?

14. Do you have a desire to eat when you are feeling lonely?

15. Do you have a desire to eat when somebody lets you down??

16. Do you have a desire to eat when you are cross?

17. Do you have a desire to eat when you are approaching something unpleasant to happen?

18. Do you get the desire to eat when you are anxious, worried or tense?

19. Do you have a desire to eat when things are going against you or when things have gone wrong?

20. Do you have a desire to eat when you are frightened?

21. Do you have a desire to eat when you are disappointed?

22. Do you have a desire to eat when you are emotionally upset?

23. Do you have a desire to eat when you are bored or restless?

External Eating

24. If food tastes good to you, do you eat more than usual?

25. If food smells and looks good, do you eat more than usual?

26. If you see or smcll something delicious, do you have a desire to eat it?

27. If you have something delicious to eat, do you eat it straight away?

28. If you walk past the baker do you have the desire to buy something delicious?

29. If you walk past a snackbar or a cafe, do you have the desire to buy something delicious?

30. If you see others eating, do you also have the desire to eat?

31. Can you resist eating delicious foods?

32. Do you eat more than usual, when you see others eating?

33. When preparing a meal are you inclined to eat something?

The assessment of each aspect of eating behavior was carried out by obtaining an average score; namely dividing the total score from the aspect of eating behavior by the number of questions in each aspect, namely by the formula:

The total score of the statement items, has a meaning of $\leq$ 33-77 (low), 78-122 (moderate), 123-165 (high). DEBQ also available in bahasa version.

Table 2.2 *Dutch Eating Behavior Questionnaire* (DEBQ) score:

	Restraint Eating	Emotional Eating	External Eating
Low	$\leq$ 33-77	$\leq$ 33-77	$\leq$ 33-77
Moderate	78-122	78-122	78-122
High	123-165	123-165	123-165

The intervals of the DEBQ-scale scores associated with the seven categories are available for the following norm-groups. The items are grouped into 5 scales, a general scale for emotional eating or scale A, with 13 questions, but also 2 separate scales for emotional eating, one that responds to diffuse emotions, scale B with 4 questions, and the other that responds to clearly defined emotions, then scale C is 9 questions. Scale A is the sum of scale B and C. Scale D is generated by 10 questions and represents eating caused by external factors, whereas Scale E, 10 questions, represents "restrained eating". All of the questions have 5 answer choices items on the DEBQ range from 1 (never) to 5 (very often), with higher scores indicating greater endorsement of the eating behavior. Each item's answer in each aspect is added up to find the standard. It is the aspect that has the highest standard that describes the most prominent eating behavior.

2.4 The correlation between Stress Levels and Eating Behavior

Every human being must have experienced stress during their life. Stress is a response that originates from within the human body to a pressure. When there is a difference between expectations and reality it is often stressful. However, the response to a stimulus between individuals can be different. Some individuals will respond to stimuli when certain situations cause stress, but there are also individuals when faced with certain situations that do not cause them stress This is because individuals have the ability to respond to each situation differently because life experiences, they have been also different (Sonya, 2019).

According to Larasati (2016), stress causes cortisol hormone levels to increase (Larasati, 2016). One form of psychological mechanism of individuals who are experiencing stress will choose appropriate coping to reduce the stress they feel. Students who are writing the thesis also face their own challenges are at risk of increased food consumption (Gryzela, 2020)

Potter and Perry's research in Andarini (2013) states that one of the stress coping strategies is nutrition. Nutrients are obtained through food or stress can be overcome by eating. So that when individuals experience stress, food is used as a strategy as a coping mechanism for stress, without paying attention to the food they are going to eat, and eating excessively.

Research conducted by Annisa Wijayanti, Ani Margawati, Hartanti Sandi Wijayanti (2019) entitled "The relationship of stress, eating behavior, and nutritional intake with nutritional status in final level students", the research used consecutive sampling method with cross sectional study research design.

There are 46 engineering students as sample. The Data of stress were obtained by using Depression, Anxiety, and Stress Scale questionnaire eating behavior data were obtained by using Adult Eating Behavior Questionnaire, data of nutritional intake were obtained by using semi quantitative FFQ, and physical activity data were obtained by using International Physical Activity Questionnaire. It was found that 15,2% subjects were underweighting and 41,3% subjects were overweight.43,5% subjects experienced stress, 54,3% subjects change their eating behavior, 54,3% had low intake of energy, 50% subjects had low carbohydrate intake, 67,4% subjects had low intake of protein, and 43,5% subjects had low physical activities. Correlation between stress, emotional under eating behavior, emotional over eating behavior, and physical activity with nutritional status were (p= 0,214; 0,726; 0,100 and 0,416), respectively. Correlation of energy intake, carbohydrate intake, protein intake with nutritional status were (p= 0,008; 0,002 and 0,003), respectively.

Research from Hasmawati and Fitriani Umar (2021) entitled "Stress Relations with Consumption Patterns in Students of The Final Level at The University of Muhammadiyah Parepare" by using observational research methods with cross sectional study research design. Data from Stress using PSS-10 and for Consumption Patterns using form recall 24 hours, food picture, and food frequency. The population in this study is all and-level student at UMPAR. Sample as many as 94vstudents. Data analysis using the Chi-square test. The results showed that there was no link between energy intake (ρ=0,69) of fat intake (ρ= 1,000) and carbohydrate intake (ρ=0,592) with the stress level of the final student at the University of Muhammadiyah Parepare. The

conclusion of this study has no stress relationship with consumption patterns on the final level student at the University of Muhammadiyah Parepare.

2.5 Synthesize Table

Table 2.3 Synthesize Table of Research Article

NO.	Title and Author	Method (Study design, Sample, Variable, Instrument, Data analysis)	Result	Conclusion
1.	Hasmawati & Umar, F. (2021) **Title:** Stress Relations with Cosumption Patterns in Students of The Final Level at The University of Muhammadiyah Parepare.	**Method**: Observasional research methods **Study design:** cross sectional study reseach design. **Sample:** 94 students at UMPAR **Variable:** - **Independent**: Stress - **Dependent**: Consumption Pattern **Instrument:** Stress using PSS-10 and for Consumption Patterns using form recall 24 hours, food picture, and food frequency **Data Analysis:** *Chi-square* test	The results showed that there was no link between energy intake (ρ=0,693) of fat intake (ρ= 1,000) and carbohydrate intale (ρ=0,592) with theρ=0,693) of fat intake (ρ= 1,000) and carbohydrate intale (ρ=0,592) with the) of fat intake (ρ=0,693) of fat intake (ρ= 1,000) and carbohydrate intale (ρ=0,592) with theρ= 1,000) and carbohydrate intale (ρ=0,693) of fat intake (ρ= 1,000) and carbohydrate intale (ρ=0,592) with theρ=0,592) with the) with the stress level of the final student at the University of Muhammadiyah Parepare.	The results showed that there was no relationship between stress levels and patterns of energy consumption, fat consumption and carbohydrate consumption in final students at the Muhammadiyah University of Parepare.
2	Wijayanti, A., Margawati, A., & Wijayanti, H. S. (2019). **Title:** The relationship of stress, eating behavior, and nutritional intake with	**Method:** Consecutive sampling method **Study design:** cross sectional study reseach design. **Sample:** 46 engineering students **Variable:** - **Independent**: Stress	It was found that 15,2% subjects were underweight and 41,3% subjects were overweight.43,5% subjects experienced stress, 54,3% subjects change their eating behaviour, 54,3% had low intake of energy, 50% subjects	There were correlation between energy intake, carbohydrate intake, and ptrotein intake with nutritional status. There were insignificance correlation between stress,

	nutritional status in final level students	**-** **Dependent**: Eating Behavior, and nutritional intake with nutritional status **Instrument:** Data of stress were obtained by using Depression, Anxiety, and Stress Scale questionnaire, eating behavior data were obtained by using Adult Eating Behavior Questionnaire, data of nutritional intake were obtained by using semi quantitative FFQ, and physical activity data were obtained by using International Physical Activity Questionnaire. **Data Analysis:** *Spearman Rank* test	had low carbohydrate intake, 67,4% subjects had low intake of protein, and 43,5% subjects had low physical activities. Correlation between stress, emotional under eating behavior, emotional over eating behavior, and physical activity with nutritional status were (p= 0,214; 0,726; 0,100 and 0,416), respectively. Correlation of energy intake, carbohydrate intake, protein intake with nutritional status were (p= 0,008; 0,002 and 0,003), respectively.	eating behavior, and fat intake with nutritional status.
3	Gryzela, E., & Ariana, A. D. (2021). **Title:** The Relationship between Stress and Emotional Eating on Female Students who are Working on Thesis.	**Method:** Quantitive survey **Study design:** Quantitive survey research **Sample:** 198 female students aged 21-22 years old who are working on their thesis. **Variable:** **-** **Independent**: Stress **-** **Dependent**: Emotional Eating **Instrument:** Perceived Stress Scale- 10 (PSS-10) and the Dutch Eating Behavior Questionnaire (DEBQ) **Data Analysis:** Pearson's r correlation technique with Jamovi 1.6.6.0 for Windows.	The result shows that there is a positive relationship between stress and emotional eating (r=0,14, p=0,04) which means that the higher the stress, the higher the emotional eating of female students who are working on their thesis.	The results of this study indicate a relationship between stress and emotional eating. The strength of the correlation between the two variables tends to be weak, so it can be interpreted that stress has a small impact on emotional eating in female students who are working on thesis. While the direction of the relationship between the two variables is positive, which means that the

				higher the stress, the higher the emotional eating of an individual. This applies also vice versa, the lower the stress of an individual, the lower his emotional eating will also decrease.
4	Hadiyuni, M. K., Purwani, L. E., & Nugrohowati, N. (2021). **Title:** Analysis of Factors Related to Eating Behavior of Final Year Students of the Faculty of Medicine, Universitas Pembangunan Nasional "Veterans" Jakarta in 2020.	**Method:** Random sampling **Study design:** Cross sectional design **Sample:** 49 students **Variable:** - **Independent**: risk factors in the form of gender, perception of body image, stress level, and emotional eating - **Dependent**: Eating behavior **Instrument:** Figure Rating Scale (FRS), Perceived Stress Scale- 10 (PSS-10) and Eating Behaviour Patterns Questionnaire (EBPQ) **Data Analysis:** bivariate analysis	The results this research state that there is a relationship between perception of body image and eating behavior, there is no influence on gender, in this study there was no relationship between stress levels and eating behavior, the meaninglessness of emotional eating with eating behavior could be caused because respondents did not always eat more when emotional.	Therefore, students are advised to build good confidence in order to create a positive perception of body image, so that they can have good eating behaviors with high levels of productivity.
5	Hennyati, S., Mardiana, E., & Saniyah, N. (2018). **Title:** The Relationship between Stress Levels in Compiling Final Project Reports (LTA) with Eating Disorders in D III Midwifery Students Semester VI STIKES Dharma Husada Bandung.	**Method:** Quantitative method **Study design:** Cross sectional design **Sample:** 62 respondents **Variable:** - **Independent**: Stress levels - **Dependent**: Eating disorder **Instrument:** PSS-10 and EBPQ **Data Analysis:** Chi-square test	The results of this study noted that final year students who were respondents with high levels of stress had a 6.5 times greater risk of having a bad diet than respondents with mild stress levels.	There is a relationship between stress levels and eating patterns, this will also have an impact in the future, where when a woman has a bad diet, the woman will have poor nutritional intake, so that it will affect the activities carried out in this regard.

			This is because the energy possessed is not in accordance with the energy expended so that it has an impact on her health such as a lack of iron or Fe which will cause a woman to suffer from anemia.
6	Kalkan Uğurlu, Y., Mataracı Değirmenci, D., Durgun, H., & Gök Uğur, H. (2021). **Title:** The examination of the relationship between nursing students' depression, anxiety and stress levels and restrictive, emotional, and external eating behaviors in COVID-19 social isolation process.	**Method:** Quantitative method **Study design:** Cross sectional design **Sample:** 411 respondents **Variable:** - **Independent**: Depression, anxiety, and stress levels - **Dependent**: Restrictive, emotional, and external eating behaviors **Instrument:** Depression, Anxiety and Stress Scale (DASS-42), and the Dutch Eating Behavior Survey (DEBQ) **Data Analysis:** Kruskal–Wallis test, Mann–Whitney U test, and Spearman's correlation test were used to evaluate the data.	In the study, it was found that emotional eating and external eating behaviors increased as nursing students' depression increased, and restrictive eating, emotional eating, and external eating behaviors increased as students' anxiety and stress increased. In line with these results; It may be beneficial to develop online psychoeducation and psychotherapy programs and direct young people to these platforms in the process of COVID-19 social isolation.	In the study, it was found that emotional eating and external eatingbehaviors increased as nursing students' depression increased, andrestrictive eating, emotional eating, and external eating behaviors increased as students' anxiety and stress increased. In line with these results; It may be beneficial to develop online psychoeducation and psychotherapy programs and direct young people to these platforms in the process of COVID-19 social isolation.

| 7 | Ramadhani, Nadia, & Mahmudiono, Trias. (2021) **Title:** Academic Stress Related To Emotional Eating Behavior Among Youth | **Method:** Observational studies
Study design: Cross sectional design
Sample: 133 respondents
Variable:
   - **Independent**: Academic Stress
   - **Dependent**: Emotional Eating Behavior
Instrument: Educational Stress Scale for Adolescent (ESSA), Dutch Eating Behavior Questionnaire (DEBQ), and Food Frequency Questionnaire (FFQ
Data Analysis: Spearman's correlation test were used to evaluate the data. | The results showed that 47.4% of students experienced moderate academic stress and 51.1% of students experienced emotional eating. There was a significant relationship between academic stress and emotional eating behavior (p=0.003). Emotional eating behavior was positively correlated with consumption of fast food or canned food, sugary foods or cakes, dairy products and sugary drinks. | The results showed a relationship between academic stress and emotional eating behavior among among adolescents at SMAN 6 Surabaya. It is known that there are still students with high academic stress who have emotional eating behavior and there are students who have the desire to eat when anxious, worried or anxious. The higher the emotional eating score, the higher the tendency to consume fast food or canned food, sweet foods or cakes, milk and its processed products and sweet drinks, although it shows a low positive relationship. Students need to increase student self-effi cacy to consume healthy foods in any condition, including stress through nutrition education programs. Further research is needed to collect data on the daily |

			intake of respondents or other negative emotional coping strategy while experiencing academic stress.

CHAPTER 3

CONCEPTUAL FRAMEWORK AND HYPOTHESIS

3.1 Conceptual Framework

Based on the theory of stress level and eating behavior, the conceptual framework of this study is as follows:

```
┌─────────────────────┐        ┌─────────────────────────┐   ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┐
│                     │        │ Last grade students'    │   │ Deliens, Clarys, Bourdeau Dhuij,│
│ Last grade students │───────▶│ assignment:             │   │ and Force (2014) said eating   │
│                     │        │ a. Regular class        │   │ behavior is influenced by several│
└─────────────────────┘        │ b. Mid semester exam    │   │ factors, including:            │
                               │ c. Final semester exam  │   │ a. Individual factor           │
                               │ d. Thesis               │   │ b. Social environment          │
                               └─────────────────────────┘   │ c. Physical environment        │
                                         │                    │ d. Macro environment           │
                                         ▼                    │ e. University characteristics  │
                               ┌─────────────────────────┐   └ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┘
                               │ Psychological impacts of │              │
                               │ writing Thesis:         │              ▼
```

Last grade students' assignment:
a. Regular class
b. Mid semester exam
c. Final semester exam
d. Thesis

Deliens, Clarys, Bourdeau Dhuij, and Force (2014) said eating behavior is influenced by several factors, including:
a. Individual factor
b. Social environment
c. Physical environment
d. Macro environment
e. University characteristics

Rindang in Triyana (2015) said the factors affecting stress in writing a thesis, including:
a. Internal factors
  1) Gender
  2) Students Personality characteristic
  3) Intelligence
b. External factors
  1) Job demands or academic assignments
  2) Student relations with the social environment
  3) Family Factor
  4) Tribe and culture
  5) Socio-economic status
  6) Student coping strategies

Psychological impacts of writing Thesis:
a. Anxiety
b. Stress
c. Fear
d. Restlessness
e. Insomnia

Priyono (2014) said the impact of stress is divided into 3 categories:
a. Physiological impact
b. Psychological impact
c. Behavioral impact
  Eating behavior (loss of appetite or excessive appetite.)

The stress level is measured using the Depression Anxiety Stress Scale 42 (DASS 42) to measure the levels of stress

Normal Stress	(0-14)
Mild Stress	(15-18)
Moderate Stress	(19-25)
Severe Stress	(26-33)
Heavy Stress	($\geq$34)

The eating behavior is measured using the Dutch Eating Behavior Questionnaire (DEBQ) to measure:
a. Restraint Eating: psychological side effects of dieting.
b. Emotional Eating: overeat when faced with high emotions.
c. External Eating: response to food stimuli that include sight, smell and taste of food regardless of hunger and satiety.

Low	($\leq$ 33-77)
Moderate	(78-122)
High	(123-165)

Note:

▭ : Variable studied

┌ ─ ─ ┐ : Variable not studied

Figure 3.1 Conceptual Frame Work of The Correlation between Stress Levels and Eating Behavior on The Last Grade Students of Bachelor In Nursing Sciences Study Program in Preparing Their Thesis at STIKES Banyuwangi in 2022

3.2 Hypothesis

According to Nursalam (2020), hypothesis is a temporary answer to the formulation of the problem or the researcher's question. The hypotheses of this research is:

"There is significant correlation between stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences Study Program in preparing their thesis at STIKES Banyuwangi in 2022"

CHAPTER 4

RESEARCH METHODS

4.1 Research Design

The type of research is a strategy used to achieve research objectives that have served as a determination or guideline for researchers in the entire research process (Nursalam, 2020).

The type of research used in this study is correlational. Correlational research is research that examines the relationship between variables. Correlational research has the aim of revealing the correlation between variables. The correlative relationship looks at the tendency that variations in one variable are followed by other variables (Nursalam, 2020).

This study used cross sectional design. The cross-sectional approach is a type of research that emphasizes the measurement or observation of independent and dependent variable data only once at a time (Nursalam, 2020).

4.2 Framework

```
┌─────────────────────────────────────────────────────────────────┐
│ Population: All the last grade students of Bachelor in Nursing    │
│ Science study program at STIKES Banyuwangi with the total number  │
│ of 92 students.                                                   │
└─────────────────────────────────────────────────────────────────┘
                                │
                                │         ┌──────────────────┐
                                │◄────────│ Total Sampling   │
                                ▼         └──────────────────┘
┌─────────────────────────────────────────────────────────────────┐
│ Sample: All of the last grade students in Bachelor in Nursing     │
│ Science study program at STIKES Banyuwangi with the total number  │
│ of 92 students.                                                   │
└─────────────────────────────────────────────────────────────────┘
                                │
                                ▼
            ┌──────────────────────────────────────────┐
            │ Research design: Cross-Sectional          │
            └──────────────────────────────────────────┘
                                │
                                ▼
            ┌──────────────────────────────────────────┐
            │ Informed Consent                          │
            └──────────────────────────────────────────┘
                                │
                                ▼
            ┌──────────────────────────────────────────┐
            │ Data collection: Google Form              │
            └──────────────────────────────────────────┘
                  │                             │
                  ▼                             ▼
        ┌──────────────────┐        ┌──────────────────────┐
        │ DASS-42          │        │ DEBQ Questionnaire   │
        │ Questionnaire    │        │                      │
        └──────────────────┘        └──────────────────────┘
                                │
                                ▼
┌─────────────────────────────────────────────────────────────────┐
│ Data management and data analysis: Editing, Coding, Scoring,      │
│ Tabulating, using Spearman Rank test with SPSS 25 for Windows     │
└─────────────────────────────────────────────────────────────────┘
                                │
                                ▼
                  ┌──────────────────────────┐
                  │ Research report          │
                  └──────────────────────────┘
                                │
                                ▼
                  ┌──────────────────────────┐
                  │ Conclusion               │
                  └──────────────────────────┘
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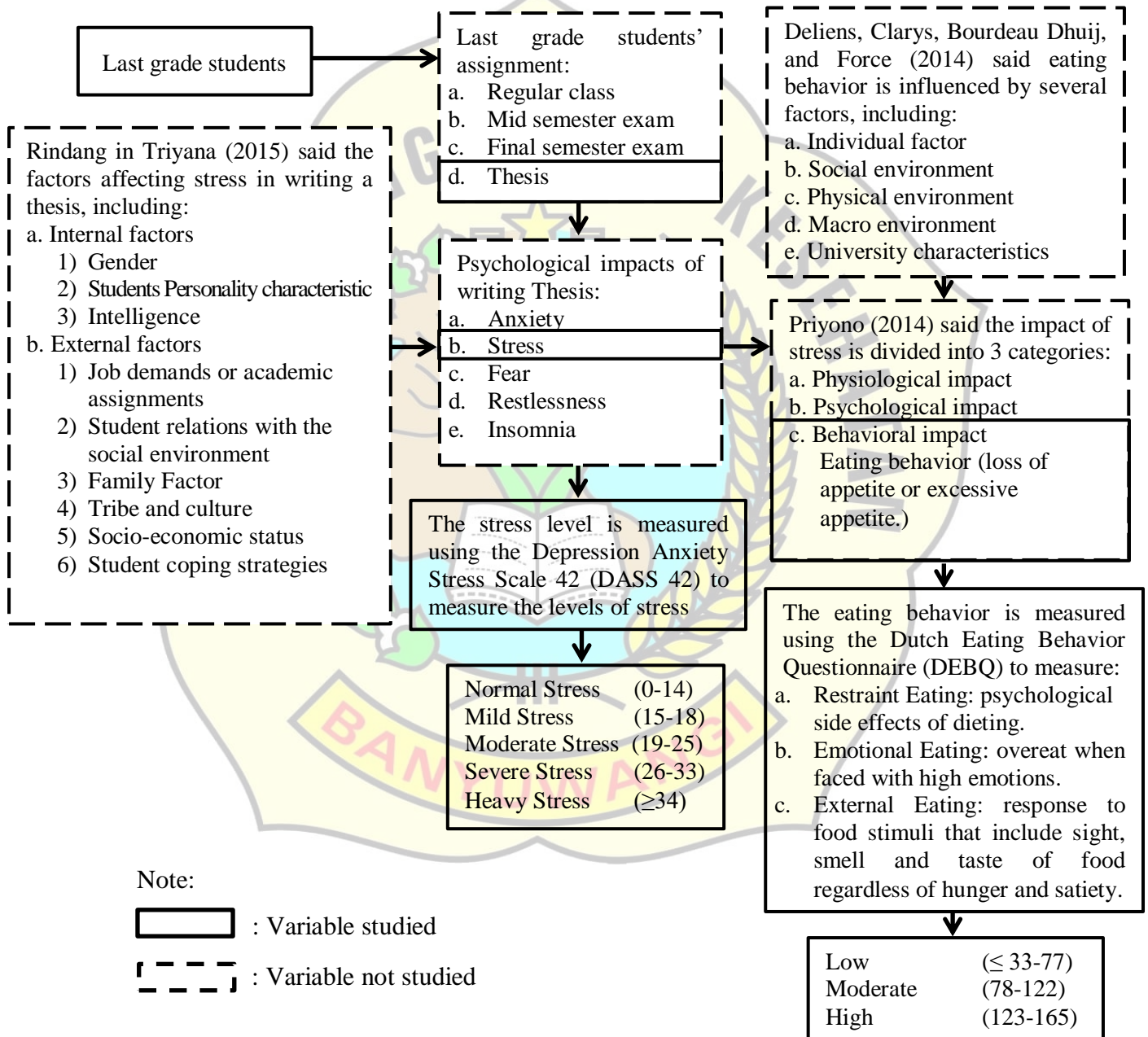
Figure 4.1 Framework for The Correlation between Stress Levels and Eating Behavior on The Last Grade Students of Bachelor in Nursing Science Study Program in Preparing Their Thesis at STIKES Banyuwangi in 2022

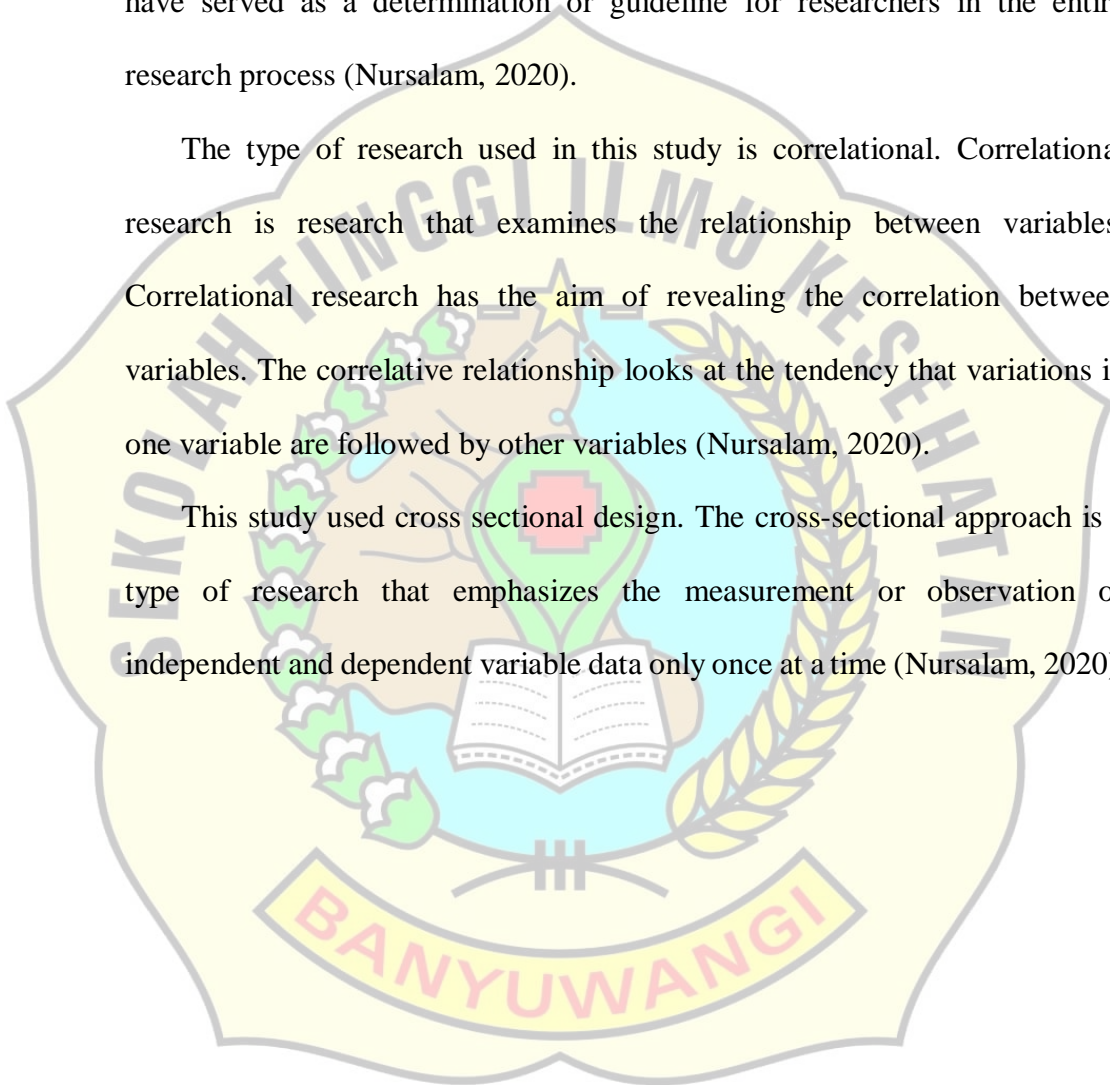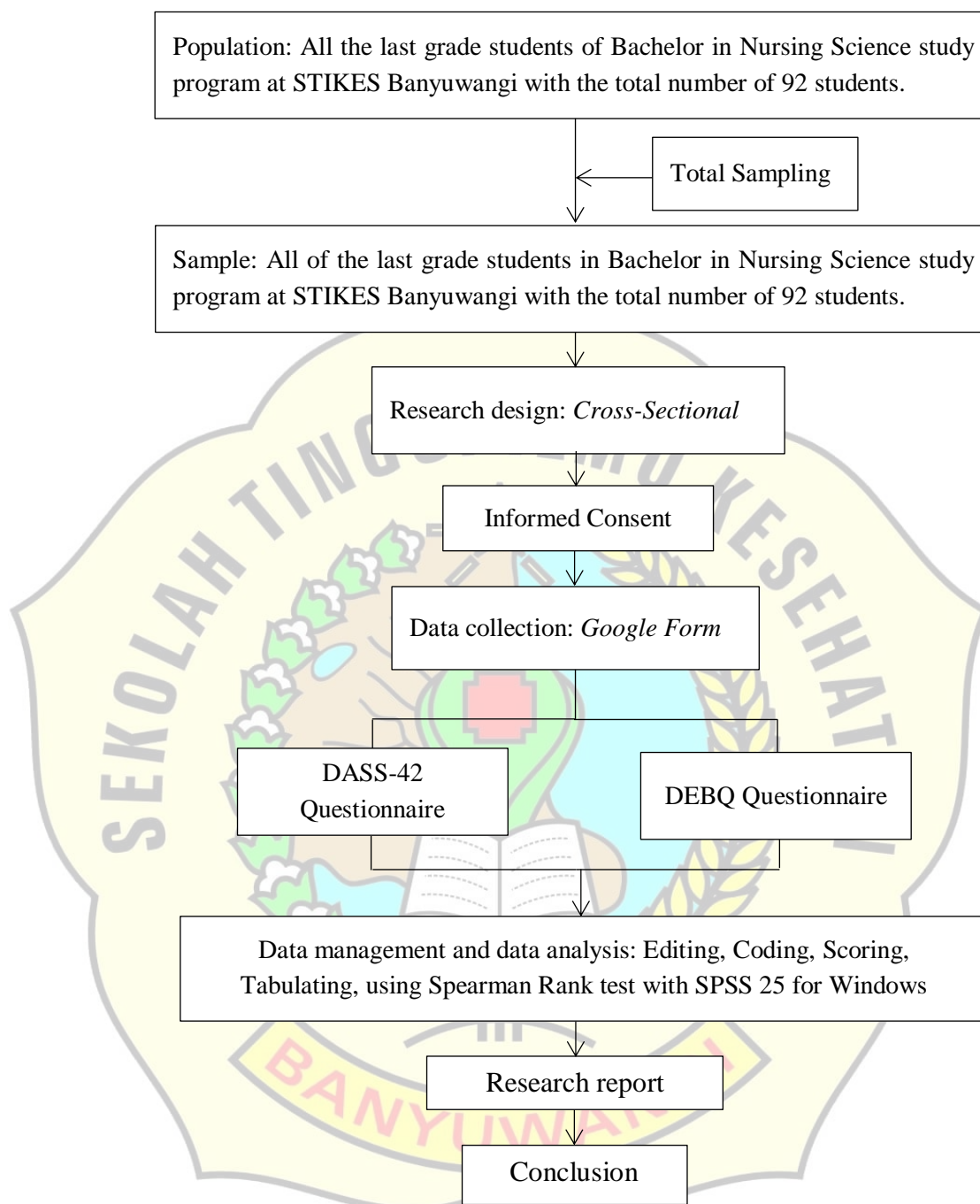**4.3 Population, Sample, and Sampling Technique**

4.3.1 Population

The research population is a subject (such as a human or a client) who has the criteria in accordance with the established criteria (Nursalam, 2020). Population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions (Sugiyono, 2016).

The population in this study were the last grade students in Bachelor of Nursing Science Study Program STIKES Banyuwangi with the total number of 92 students.

4.3.2 Sample

According to Nursalam (2020), sample is part of the population that is affordable and can be used as research subjects through sampling. The sample in this study were all of the last grade students on Bachelor of Nursing Science study program with the total numbers of 92 at STIKES Banyuwangi.

4.3.3 Sampling Technique

The sampling technique used in this research is total sampling technique. According to Sugiyono (2016: 85), total sampling is a sampling technique when all members of the population are used as samples. The samples taken in this study were last grade students in Bachelor of Nursing Science study program, with the total number of 92 students. The reason for using the entire population as a sample is because it represents the entire population and because if there are less than 100 populations, then

all of them are used as research samples, therefore the researchers took 92 samples.

4.4 Identification of Variable

Variables are behaviors or characteristics that give value on different things; objects, humans, etc. (Nursalam, 2020). The variables in this research are as follows:

4.4.1 Independent Variable

The independent variable is the variable that influences, the value determines the other variables (Nursalam, 2020). The independent variable in this research is Stress Levels.

4.4.2 Dependent Variable

The dependent variable is the variable that is affected, the value is determined by another (Nursalam, 2020). The dependent variable in this research is Eating Behavior on The Last Grade Students of Bachelor in Nursing Sciences Study Program in Preparing Their Thesis at STIKES Banyuwangi.

4.5 Operational Definition

Operational definitions are descriptions or explanations of all variables and terms used in operational research, making it easier for presenters or readers to interpret the meaning of research (Nursalam, 2020).

Table 4.1 Operational Definition: The Correlation between Stress Levels
and Eating Behavior on The Last Grade Students on Bachelor in
Nursing Science Study Program in Preparing Their Thesis at
STIKES Banyuwangi in 2022.

Variable	Operational Definition	Indicator	Measuring Instrument	Scale	Score
Independent Variable: Stress levels	Stress is a process that assesses something that is threatening, or dangerous and the individual responds to the event on a physiological, emotional, cognitive and behavioral level.	Stress indicator in *Depression Anxiety Stress Scale 42 (DASS42)* is formed to measure negative emotional status: 1) Difficulty relaxing 2) Nervous arousal 3) Easily upset or agitated 4) Impatient	*DASS 42 Questionnaire (DASS42)*	Ordinal	0-14: Normal 15-18: Mild 19-25: Moderate 26-33: Severe >34 : Heavy
Dependent Variable: Eating Behavior	Eating behavior is a person's behavior that describes eating habits, frequency of eating, eating patterns, and eating preferences.	1) Restraint Eating 2) Emotional Eating 3) External eating	*Dutch Eating Behavior Questionnaire (DEBQ)*	Ordinal	33-77 : Low 78-122: Moderate 123-165: High

4.6 Data Collection and Data Analysis

4.6.1 Research Instrument

Research instrument is a tool or facility used for data collection so that

the work is lighter and gets good results, in the sense of being more

accurate, complete, and systematic so that it is easy to process. The variety

of types of instruments used in nursing are classified into five parts,

namely: measurement, bio-physiology, observation, interviews,

questionnaires, and scales (Nursalam, 2020).

This study used *Depression Anxiety Stress Scale 42* (DASS 42) questionnaire to measure stress levels and *Dutch Eating Behavior Questionnaire* (DEBQ) to measure eating behavior via Google form.

4.6.2 Research Location and Time

1. Location or Place of Research

The research was conducted in Bachelor of Nursing Science study program at STIKES Banyuwangi.

2. Research Time

This research started in 6th to 10th June 2022.

4.6.3 Data Collection

The data collection procedure is an approach process that carried out on the subject and the process of collecting the characteristics of the subject needed for a study (Nursalam, 2020).

The data collection procedure in this study was by total sampling and questionnaires. Total sampling is a sampling technique when all numbers of the population are used as the sample. This sample is used if the population is relatively small, total sampling is also called a census, where all members of the population are used as samples (Sugiyono, 2016). Questionnaire is a technique of collecting data by making a list that contains a number of alternative answers and they are closed questions. Respondents only need to choose the most appropriate answer (Sugiyono, 2016).

4.6.4 Data Collection Process

According to Nursalam (2020), researchers have to perform five tasks in the research process. These tasks must be carried out sequentially and related. These tasks include selecting subjects, collecting data consistently, maintaining control in the research, maintaining integrity or validity, and solving problems. The steps for collecting data in this study are as follows:

1. First, the researcher submitted a title to the PPPM STIKES Banyuwangi.

2. Next, the researcher asked for a preliminary study letter from the PPPM STIKES Banyuwangi which was given to the Bachelor in Nursing Science Study Program.

3. Researchers coordinate with and provide the letters to the Bachelor of Nursing Science Study Program to obtain permission for initial data collection and research permission.

4. If the research permit has been obtained, the researcher conducts research by providing informed consent.

5. The researcher gave a questionnaire using Google Form to the respondents via WhatsApp.

6. Researchers used DASS 42 (Depression Anxiety Stress Scale) to measure stress levels. This questionnaire was given to the research respondents.

7. Researchers used DEBQ (Dutch Eating Behavior Questionnaire) to measure eating behavior.

8. Researchers recap the research results.

4.6.5 Descriptive Analysis

a. Data Analysis Steps

1) Editing

Editing is an attempt to recheck the truth of data obtained or collected. Editing can be done at the data collection stage or after the data is collected (Ferguson, 2019).

2) Coding

Coding is the giving of codes to the data which aims to translate the data into codes, usually in the form of numbers (Nursalam, 2020).

a) *Stress Levels Coding*

Normal : 0

Mild : 1

Moderate : 2

Severe : 3

Heavy : 4

b) *Eating Behavior Cooding*

Never : 1

Rare : 2

Sometimes : 3

Often : 4

Always : 5

3) Scoring

Scoring is an assessment in the form of numbers on the answers to questions used to obtain quantitative data (Nursalam, 2020).

a) Scoring for Stress Level

Normal   : 0 – 14

Mild   : 15 – 18

Moderate : 19 – 25

Severe   : 26 – 33

Heavy   : >34

b) Scoring for Eating Behavior

Low   : 33-77

Moderate : 78-122

High   : 123-165

4) Tabulating

Tabulating is the presentation of data in the form of a table consisting of columns and rows. This table is used to explain several variables resulting from observations, surveys, and research so that the data is easy to understand and read (Nursalam, 2020).

4.6.6. Statistical Analysis

This study uses Spearman rank correlation test 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. The mean, standard deviation, range, percentage and frequency will be used to describe demographic data. From the data that has been collected, an analysis was carried out on the correlation between stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences Study Program in preparing their

thesis at STIKES Banyuwangi in2022 using Spearman rank correlation test. The reason why the researchers used the Spearman rank correlation test was because the data scale of the two variables was an ordinal data scale. To find out if there is correlation between stress levels and eating behavior, it performed statistical Spearman rank correlation test using SPSS 25 for Window with $\alpha= 0,05$.

The nature of the correlation will determine the direction and correlation. A positive correlation occurs when an increase in one variable causes an increase in the other variable, while a negative correlation occurs when an increase in one variable causes a decrease in the other variable. The intensity of correlation is expressed in the number of correlation coefficients ranging from 0 to 1 for positive correlations and between 0 to -1 for negative correlations. The closeness of the correlation can be grouped as seen in Table 4.2 (Sugiyono, 2016).

Table 4.2 Correlation intensity of Spearman Rank Test on the Correlation between Stress Levels and Eating Behavior on the Last Grade Students of Bachelor in Nursing Sciences Study Program in Preparing Their Thesis at STIKES Banyuwangi in 2022

Interval Correlation Coefficient	Correlation intensity
0.00-0.199	The correlation is very weak
0.20-0.399	The correlation is weak
0.40-0.599	The correlation is quite strong
0.60-0.799	The correlation is strong
0.80-1.00	The correlation is very strong

- $H_0 =$ There is no correlation between stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences Study Program in preparing their thesis at STIKES Banyuwangi in 2022

- $H_1 =$ There is a correlation between stress levels and eating behavior on the last grade students of Bachelor in Nursing Sciences Study Program in preparing their thesis at STIKES Banyuwangi in 2022

According to Arikunto (2014), the scale interpretation of the frequency distribution is:

Whole   : 100%

Almost entirely   : 76%-99%

Most   : 51%-75%

Half   : 50%

Almost half   : 26%-49%

Small fraction   : 1%-25%

None   : 0%

Table 4.3. The method of analysis for independent variable and dependent variable.

Aim	Variable	Measuring scale	Statistical approach
Identify demographic variable data	1. Age 2. Gender 3. Parent's profession 4. Parent's income 5. Tribe 6. Religion 7. Residence 8. Writing thesis affect eating behavior	Ratio Nominal Nominal Nominal Nominal Nominal Nominal Nominal	Descriptive statistic
Correlation between Stress Levels and Eating Behavior on the Last Grade Students Of Bachelor In Nursing Sciences Study Program in Preparing Their Thesis at STIKES Banyuwangi	Stres: 1. Normal 0-14 2. Mild 15-18 3. Moderate 19-25 4. Severe 26-33 5. Heavy > 34 Eating behavior: 1. Low 33-77 2. Moderate 78-122 3. High 123-165	Ordinal Ordinal	Spearman Rank Correlation test

4.7 Validity and Reliability Test

4.7.1 Validity Test

Validity test is a test of measuring instruments used to find out that the measuring instrument or questionnaire can really be measured. If the results of the validity test are high then the measuring instrument is valid, but if the results of the validity test are low then the measuring instrument has low validity (Arikunto, 2014).

a. DASS 42 Questionnaire

In this research instrument, it is not necessary to test the validity and reliability because the DASS 42 questionnaire which was developed by Lovibond, S.H & Lovibond, P.F and adopted by Noviani (2018) has been tested for validity and there are 14 questions stated to be valid in the questionnaire representing stress indicators.

b. Dutch Eating Behavior Questionnaire

The DEBQ questionnaire consists of 33 questions containing 13 questions related to the emotional aspect of eating (emotional eating), 10 questions about externally induced eating, and 10 questions related to eating control (restrained eating). The validity of this questionnaire is valid at a correlation coefficient of 0.45 (Khotibudin 2017).

4.7.2 Reliability Test

The reliability test was carried out to find out the consistency measuring instrument used. The aim is to determine whether the measuring instrument to be used is reliable and remains consistent when measurements are repeated (Butarbutar, T., 2014).

a. Depression Anxiety Stress Scale 42 (DASS 42)

The results of the reliability test of the DASS 42 questionnaire found that the Cronbach alpha value was 0.939 (Sadana, 2018)

b. Dutch Eating Behavior Questionnaire (DEBQ)

The results of the DEBQ reliability test conducted by Khotibudin (2017) showed the coefficient of Cronbach's Alpha on this scale is 0.910.

4.8 Research Ethics

This research has been ethically tested by *Komisi Etik Penelitian Kesehatan* (Health Research Ethics Commission) STIKES Banyuwangi and has been declared to have passed the ethical test with Ethical Clearance number 113/01/KEPK-STIKESBWI/V/2022. The implementation of this research begins with the researcher applying for permission to the Head of Bachelor in

Nursing Science Study Program at STIKES Banyuwangi to get approval in data collection. After the permit application was approved, the researcher made observations on the subject under study by focusing on the last grade students in Bachelor of Nursing Science study program.

4.8.1 Informed Consent

Informed consent is information that must be given to the subject completely, contains the purpose of the research to be carried out and the subject has the right to freely participate or not as a respondent (Nursalam, 2020).

1. The researcher have obtained permission from the respondent before conducting the research.

2. There must be evidence of the respondent's signature as a form of consent to become a respondent in the study.

3. The researcher should not force the respondents when they are not willing to be the subject of research.

4.8.2 Anonymity

Subjects do not need to put their names on the data collection sheet, just write the number or code to guarantee the confidentiality of their identity. If the nature of the researcher really demands to know the subject's identity, he must obtain prior approval and take steps to maintain confidentiality and protect the answer (Wasis, 2017).

4.8.3 Confidentially

Confidentiality of information obtained by researchers will be guaranteed confidentiality. Research data will only be displayed for academic purposes (Wasis, 2017).

4.8.4 Right to Self Determination

Someone will be a respondent in this study if the respondent agrees, the respondent is welcome to sign a letter of approval. By signing this letter, the respondents are required to be calm and have enough time to think and understand (Nursalam, 2020).

4.8.5 Veracity

The writer has to be honest when collecting data, literature, methods, procedures, research, and publication of results. The writer should be honest about the shortcomings or failures of the research process. The writer does not recognize work which is not his/her job (Wasis, 2017).

4.8.6 Non Maleficence

Non-maleficence is a principle which means that every action a person takes does not cause harm physically or mentally to the other (Wasis, 2017).

4.8.7 Respect for Person

Respect for person is thing that need to be considered. The researcher must consider in depth the possible dangers and misuse of research and provide protection to respondents who are vulnerable to the dangers of research (Wasis, 2017).

4.8.8 Justice

Respect for person a thing that need to be considered. The researchers must consider in depth the possible dangers and misuse of research and provide protection to respondents who are vulnerable to the dangers of research (Wasis, 2017).

4.8.9 Beneficence

Ethical imperatives to seek maximum benefits and minimize losses or risks to the subject and research errors. In this case the research must be carried out appropriately and accurately. The respondent's safety and health are maintained (Wasis, 2017).

4.8.10 Research Limitation

This research was only conducted using a survey method through online questionnaire. Because of using online questionnaire, the researcher has to remind the respondents constantly because the researcher could not control the respondent's answer, in case the respondent could be dishonest in giving their response.