

CHAPTER IV RESEARCH METHODS

A. Types of Research and Research Design

This research falls into the quantitative research category. The research design used was a quasi-experimental one with a pre-test and post-test with a control group. The aim was to study the influence of the independent variables (Journaling Therapy and Self-Compassion Training) on the dependent variable (Academic Stress Level).

This study divided respondents into two groups: a control group and an intervention group. The intervention group underwent journaling therapy and self-compassion training, while the control group underwent Benson Therapy. The research design is illustrated in the following diagram:

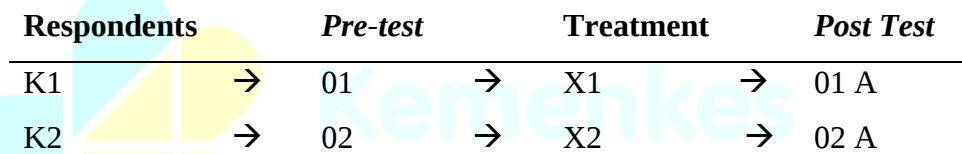


Chart 4.1 Research Design

Information:

K1	:	Respondents in the intervention group
K2	:	Respondents in the Control group
01	:	Measurement of stress levels before intervention in the intervention group
02	:	Measurement of stress levels before intervention in control groups
X1	:	Providing Journaling Therapy and Self-Compassion Training interventions
X2	:	Benson Therapy Administration
01 A	:	Measurement of stress levels after being given Journaling therapy and Self Compassion Training in the intervention group
02 A	:	Measurement of stress levels after Benson Therapy was carried out in control groups

B. Research Variables

1. Independent Variables

The independent variables (free variables) in this study are Journaling therapy and Self Compassion Training.

2. Dependent Variable

The dependent variable (bound variable) in this study is the level of academic stress in final year nursing and midwifery students.

C. Location and Time of Research

1. Research Location

This research will be conducted at the Bengkulu Ministry of Health Polytechnic of Health, namely in the nursing and midwifery department.

2. Research Time

This research will be conducted in June 2026

A. Population and Sample

1. Population

The population in this study were final year nursing students at the Ministry of Health Polytechnic of Bengkulu, namely 92 nursing students and 91 midwifery students.

2. Sample

A sample is a small part of the total and reflects various characteristics found in the population.(Sugiyono, 2020)In this study, the sample selection was conducted using the probability sampling method, which indicates that the sample was selected randomly. The sample in this study consisted of a portion of final-year nursing and midwifery students currently studying at the Poltekkes Kemenkes Bengkulu. The method chosen was proportional random sampling, where sampling from the population was carried out proportionally and balanced with classes experiencing academic stress with the following inclusion and exclusion criteria:

a. Inclusion Criteria

- 1) Final year students of Level IV (STR) majoring in nursing and midwifery who are still actively studying
 - 2) Students who are willing to be research respondents until the end of the research
 - 3) Students with moderate-severe stress levels (42-90)
- b. Exclusion Criteria
- 1) Students who do not follow therapy until the end
 - 2) Students undergoing psychiatric treatment

The calculation of the minimum number of research samples is determined based on the formula for the difference between 2 means as below:

$$n = \frac{\sigma^2(Z1 - \alpha + Z1 - \beta)^2}{(\mu_0 - \mu_\alpha)^2}$$

Information:

- n = Number of samples
- $Z1-\alpha$ = Normal standard deviation for α (standard deviation α = 1.64).
- $Z1-\beta$ = Normal standard deviation for β (standard deviation β = 0.84)
- μ_0 = Mean values before intervention obtained from literature
- μ_α = Mean values after intervention obtained from literature
- σ^2 = Standard deviation

Based on study (Smyth et al., 2021) which shows the mean value of the intervention group is ($\mu_0=14.2$) and the control group is ($\mu_0=18.1$) and the standard deviation is ($\sigma=7.8$). Based on the effect size calculation, the Cohen's value ($d=0.5$) is obtained which is included in the moderate category.

$$n = \frac{\sigma^2(Z1 - \alpha + Z1 - \beta)^2}{(\mu_0 - \mu_\alpha)^2}$$

$$n = \frac{7,8^2 \times (1,96 + 0,84)^2}{(3,9)^2}$$

$$n = \frac{60,84 \times 7,84}{15,21}$$

$$n = \frac{477,0}{15,21}$$

$$n = 31,36$$

$$n = 32$$

Drop out :

$$n' = n / (1-f)$$

$$n' = 32 / (1-0.1)$$

$$n' = 3,2 = 4 \text{ people}$$

$$\text{Total Sample} = 32 + 4 = 36 \text{ Students}$$

Based on the sample calculations, the minimum sample size required for the intervention group was 36 students, and for the control group, 36 students. Therefore, the total minimum sample size required for this study was 72 students. In this study, 72 final-year nursing and midwifery students were selected for the intervention and control groups, with a total of 72 respondents. The distribution of students sampled in this study was determined based on the proportional random sampling formula. Sugiyono (2020) below:

$$n_i = \frac{N_i}{N} \cdot n$$

this : Number of samples for each department

n : The total number of samples desired

This : Population of each major

N : Total population

Table 4.1 Distribution of Students Who Are Sampled

Level	Class	Population Number	Sample
4	Str Kep	92	$(92/183) \times 72 = 37$
4	Str Keb	91	$(91/183) \times 72 = 35$
Total		183	72

B. Data collection

1. Data source

This research uses primary data obtained directly from respondents through interviews which include:

- a. Before conducting the research, the researcher first explains the purpose of the study to potential respondents and asks for their consent to participate. If the respondent refuses, the research process is canceled. However, if the respondent agrees, the researcher will ask them to sign a consent form indicating their willingness to participate in the research.
- b. Explain to students the objectives, benefits and duration of the research to be conducted.
- c. Data Entry
- d. The recorded results in the form of ratio data are then processed using a computer.

2. Data Collection Tools

The tool used to measure academic stress levels is an academic stress questionnaire based on the Perception of Academic Stress Scale (PASS). Measurements will be taken at the time of...

- a. Pre-test: Before the Journaling Therapy and Self Compassion training sessions begin to assess stress levels.
- b. Post test: After conducting Journaling Therapy and Self Compassion training to assess the effects of the interventions carried out

3. Data Collection Tool Test

The instrument used in this study was the Perceptions of Academic Stress Scale (PASS) developed by (Bedewy & Gabriel, 2015) and has been proven valid and reliable with a Cronbach's Alpha value of 0.70 in the original version to measure students' academic stress.

4. Data Collection Procedures.

The data collection procedure in this study involved asking respondents to complete a questionnaire before and after the intervention (pre-post test). The questionnaire was used for data collection, and the researcher was the person responsible for collecting the data.

- a. Respondent characteristic data, gender, student ID number and age, filled in via the questionnaire sheet
- b. Academic stress level data was collected using the Perception of Academic Stress Scale (PASS) instrument with a score range of 18-90.

C. Data processing

Data collected through the data collection process will be analyzed using a computer program with the following stages:

1. *Editing*

After collecting data from respondents, researchers will review and verify the data is consistent with the PASS questionnaire. They will then make corrections to the questionnaires completed by respondents to ensure they are complete.

2. *Coding*

Numeric coding of data consisting of several categories was done to simplify the analysis process and expedite the data entry stage. The coding process was as follows: code 1 was assigned to the intervention group and code 2 to the control group. For the gender variable, the category "male" was coded 1, and "female" was coded 2.

3. *Data Entry*

The stage of entering data into the computer according to existing variables. The obtained data will then be analyzed according to its type and purpose.

4. *Processing*

The data that has been grouped is then statistically tested using a computer.

5. *Cleaning*

Cleaning is done to recheck the data that has been entered into the computer device to see if there is any missing data by making a list, and the data that has been entered is correct or incorrect by looking at the variations in data or codes used.



D. Data analysis

1. Univariate Analysis

Univariate data analysis was used to explain the independent and dependent variables and to provide a general overview of the characteristics of the respondents in the study. The numerical data used in the study were age, pre-test, and post-test scores for academic stress, to determine the mean, median, maximum-minimum, standard deviation, and 95% CI of the mean.

2. Bivariate Analysis

Bivariate analysis was conducted to identify the influence of Journaling Therapy and Self Compassion Training on reducing academic stress levels. The data began with a normality and equality test for both groups using the Shapiro-Wilk method. To test for differences in average academic stress levels before and after the intervention, both in the intervention and control groups, a paired t-test was used if the data were normally distributed. However, if the data distribution was not normal, the Wilcoxon test was used as an appropriate alternative analysis.

To determine the significant difference in the average between groups using the Man-Whitney test because the data is not normally distributed and for normally distributed data using the Independent t-test. If $p < 0.05$ is obtained, there is a difference so it is concluded that there is an effect, if $p > 0.05$ is obtained, there is no difference so it is concluded that there is no effect. $\sigma\sigma$

Table 4.2 Bivariate Test

Variables	Parametric Test	Non-Parametric
The results of measuring Journaling Therapy and Self Compassion Training on pre-post academic stress levels in the intervention group	<i>Paired t-test</i>	<i>Willcoxon rank test</i>

and control group		
the mean difference between the intervention group and the control group	<i>Independent t test</i>	<i>Mann Whitney</i>



E. Research Flow

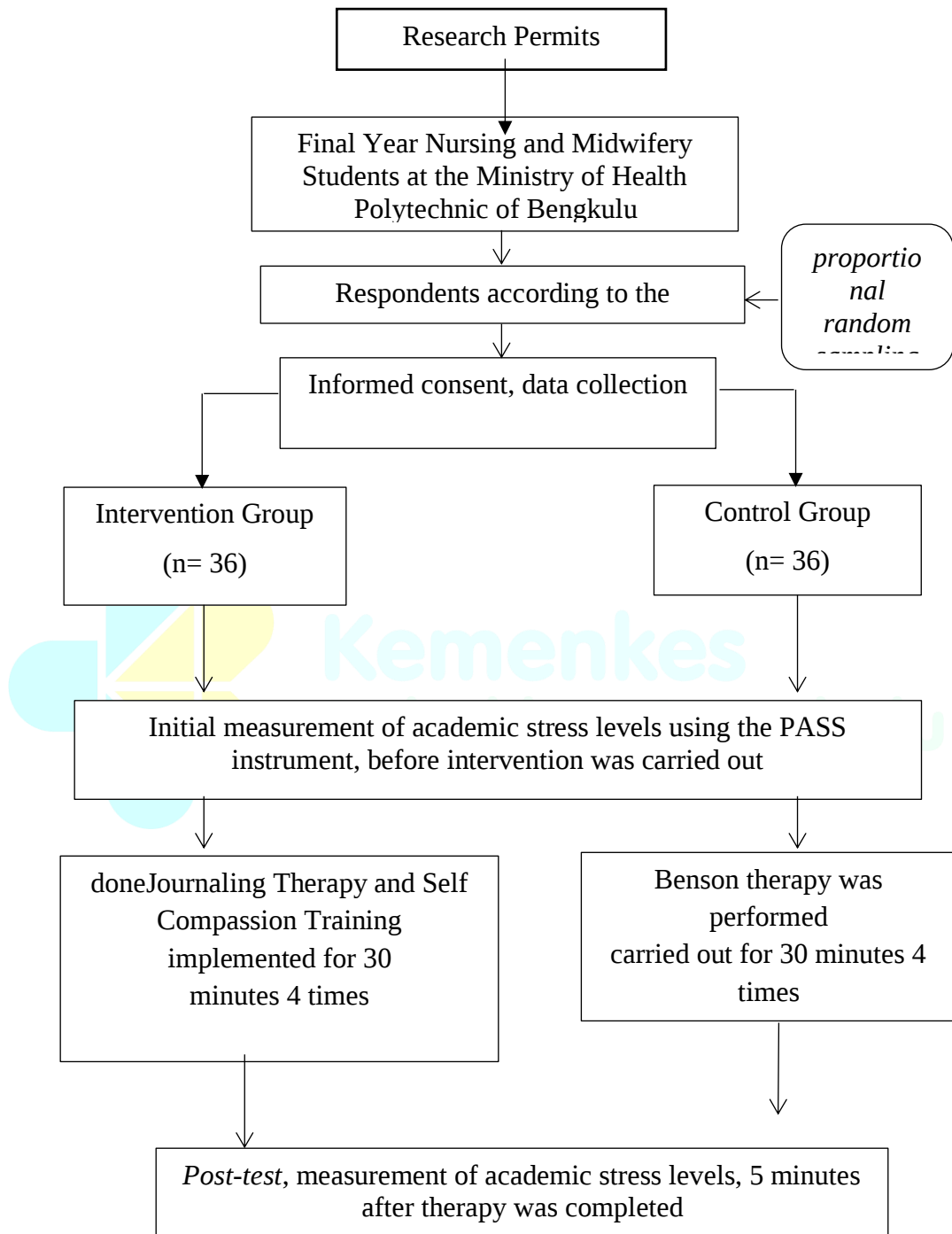


Chart 4.2Research Flow

F. Research Ethics

Researchers consider research ethics and legal aspects to protect respondents from any physical and psychological harm and discomfort. This is achieved by adhering to the following ethical principles:

1. Freedom of Choice (Self Determination)

Before conducting this research, the researcher will provide respondents with the opportunity to choose whether or not to participate without any coercion from the researcher. Prior to conducting the research, the researcher will first explain the purpose, benefits, intent, and procedures of the study to the respondents. Respondents who agree and are willing to participate in the research will be asked to sign an informed consent form.

2. Confidentiality

The principle of confidentiality is applied to protect the confidentiality of respondents' identities, safeguard the information provided, and ensure that it is not used for purposes other than the research. To maintain respondent privacy, researchers will not include their names when filling out the characteristics data, only including their initials and a code in the research report. Respondents' signatures will be included on the written consent form.

3. Justice

Researchers will maintain fairness in treating all respondents during the research process, without showing bias or giving preferential treatment to certain respondents.

4. Beneficiency

The principle of beneficence is an ethical principle that ensures that the implementation of this research will benefit both parties. For respondents, the benefit gained through this research is increased knowledge about methods for managing academic stress using non-pharmacological therapeutic approaches.

5. Non-Maleficence

The principle of non-maleficence ensures that this research will not cause discomfort, harm, or dangerous risks to respondents, either physically or mentally.

G. Research Flow

The research process that will be carried out is:

1. The research was carried out after obtaining academic approval, accompanied by the preparation of a letter requesting permission to carry out the research.
2. After obtaining a research permit, the researcher will conduct research at the Bengkulu Ministry of Health Polytechnic of Health.
3. The researcher then submitted the permit letter to the Director of the Bengkulu Ministry of Health Polytechnic and obtained approval to continue the research process.
4. After obtaining official approval, the researcher made a joint agreement with potential respondents who met the inclusion criteria.
5. The researcher carries out Informed Consent on prospective respondents and the researcher makes a contract with the prospective respondents to carry out an intervention on the respondents, explains the research activity contract schedule to the respondents and asks the respondents to sign a consent form for the intervention.
6. Researchers also explained the influence of Journaling Therapy and Self Compassion Training on students' academic stress levels.
7. Researchers provided participation agreement documents, informed consent and research questionnaire sheets to respondents.
8. The intervention group received Journaling Therapy and Self-Compassion Training four times a week for 30 minutes. The first session was 15 minutes of Journaling Therapy, followed by a 3-minute break, followed by 15 minutes of Self-Compassion Training. The control group received

Benson Therapy four times a week for one week, each session lasting 30 minutes.

9. Academic stress was measured using the PASS questionnaire. A pre-test was administered before the intervention. A post-test was administered after the therapy.



