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APPENDICES

Appendix 1 Research Participant Information Sheet and Informed Consent

RESEARCH PARTICIPANT INFORMATION SHEET

Dear Prospective Participant,

My name is **Indo Putra Ali Dayanto**, a student in the Bachelor of Applied Nursing Program at the Health Polytechnic of the Ministry of Health, Bengkulu. I reside at Jalan Kuala Alam RT 14 RW 04 No. 59, Tanah Patah, Bengkulu City, and may be contacted at +62 822-1625-6919. I am conducting a research study entitled: **"Comparison of Fatigue Levels Among Chronic Kidney Disease Patients Undergoing Hemodialysis Via Arteriovenous Fistula (AVF) and Catheter Double Lumen (CDL) Vascular Access at the Hemodialysis Unit of Bengkulu Regional General Hospital 2026".** The purpose of this study is to analyze the differences in fatigue severity between patients with CKD undergoing maintenance hemodialysis using an AVF and those using a CDL as vascular access.

If you agree to participate in this study, you will be asked to complete a questionnaire, which will take approximately 10–15 minutes. Data will be collected through a face-to-face interview conducted by the researcher while you are undergoing your scheduled hemodialysis session. The interview will be carried out at a time that is most comfortable and convenient for you. Participation in this study involves minimal risk. You may experience slight discomfort while answering some of the questionnaire items; however, no serious physical or psychological risks are anticipated.

All personal information and research data that you provide will be kept strictly confidential. Your identity will not be disclosed in any publication or report arising from this study. The information collected will be used solely for research purposes. Your participation in this study is entirely voluntary. You have the right to decline participation or to withdraw from the study at any time without providing a reason. Refusing to participate or withdrawing from the study will not affect the quality of medical care, nursing care, or any healthcare services you receive during your hemodialysis treatment.

If you have read and understood the information provided and voluntarily agree to participate in this study, you are kindly requested to sign the attached **Written Informed Consent Form**. Thank you very much for your time, consideration, and willingness to participate in this research.

Yours sincerely,
Researcher

Indo Putra Ali Dayanto
Student ID. P01720322021

Appendix 2 Invitation Letter for Research Participation

INVITATION LETTER FOR RESEARCH PARTICIPATION

Dear Sir/Madam,

My name is **Indo Putra Ali Dayanto**, a student in the **Bachelor of Applied Nursing Program, Health Polytechnic of the Ministry of Health Bengkulu**, with the following details:

Name : Indo Putra Ali Dayanto
Student ID : P01720322021

I am currently conducting a research study entitled: **"Comparison of Fatigue Levels Among Chronic Kidney Disease Patients Undergoing Hemodialysis Via Arteriovenous Fistula (AVF) and Catheter Double Lumen (CDL) Vascular Access at the Hemodialysis Unit of Bengkulu Regional General Hospital 2026".**

I would like to respectfully invite you to participate in this study as a research participant. Your participation is entirely voluntary, and you are free to decline or withdraw from the study at any time without any consequences to your medical care or relationship with the healthcare providers. The information collected during this study is expected to contribute to the advancement of nursing knowledge and provide valuable evidence for healthcare professionals, educational institutions, and the broader community. All information obtained from participants will be treated with strict confidentiality and will be used solely for research purposes. Personal identities will not be disclosed in any reports or publications resulting from this study. Your willingness to participate in this research is greatly appreciated. Thank you for your time, attention, and valuable contribution to the successful completion of this study.

Bengkulu, ... 2026
Respectfully,
Researcher

Indo Putra Ali Dayanto
Student ID. P01720322021

Appendix 3 Informed Consent Form

INFORMED CONSENT TO PARTICIPATE IN RESEARCH

I, the undersigned:

Name : ……

Age : ……

Sex : **Male / Female***

Address : ……

I have read and understood the information provided in the Participant Information Sheet. I have been given the opportunity to ask questions and discuss all aspects of the study, and all of my questions have been answered satisfactorily. I hereby **AGREE / DO NOT AGREE*** to participate as a respondent in the research conducted by Indo Putra Ali Dayanto, an Undergraduate Applied Nursing Student at the Health Polytechnic of the Ministry of Health, Bengkulu, entitled: **"Comparison of Fatigue Levels Among Chronic Kidney Disease Patients Undergoing Hemodialysis Via Arteriovenous Fistula (AVF) and Catheter Double Lumen (CDL) Vascular Access at the Hemodialysis Unit of Bengkulu Regional General Hospital 2026".**

I voluntarily provide my consent to participate in this study without any coercion from any party. I understand that my participation is entirely voluntary, and I may withdraw from the study at any time without any consequences. I hereby sign this consent form for its intended purpose.

***) Please strike out the option that does not apply**

Bengkulu, ... 2026

Participant

(……..……..)

Appendix 4 Respondent Characteristics Questionnaire

RESPONDENT CHARACTERISTICS DATA COLLECTION QUESTIONNAIRE

Instructions:

1. Please place a check mark (√) in the appropriate box and complete all blank spaces where applicable.
2. Please answer each question based on your personal information.
3. If you have any questions or require clarification regarding this questionnaire, please ask the researcher.

1. Full Name : …….
2. Type of Vascular Access : AVF ☐ CDL ☐
3. Sex : Male ☐ Female ☐
4. Age : ……... years < 35 years ☐ 35-50 years ☐ > 50 years ☐
5. Duration of Hemodialysis : …….. months / years* < 1 year ☐ 1-3 years ☐ > 3 years ☐
   ***) Delete as appropriate.**
6. Primary Diagnosis : Diabetes mellitus ☐ Hypertension ☐ Heart disease ☐
   Other*: ……
   ***) If other, please specify.**
7. Number of Comorbidities : None Comorbidities ☐ 1-2 Comorbidities ☐ ≥3 Comorbidities ☐
8. Hemoglobin (Hb) Level : ……...g/dl
9. Post-Hemodialysis Body Weight (Previous HD Session) : ……...kg
10. Pre-Hemodialysis Body Weight (Current HD Session) : ……kg

Appendix 5 Research Instrument Questionnaire for Fatigue Level Measurement

RESEARCH INSTRUMENT
Functional Assessment of Chronic Illness Therapy (FACIT) Fatigue Scale (Version 4)

Filling instructions:

Below is a list of statements that other people with your illness have said are important. **Please circle or mark (√) one number per line to indicate your response as it applies to the past 7 days.**

No	Question	Answer					Score
		Not At All (4)	A Little Bit (3)	Somewhat (2)	Quite a Bit (1)	Very Much (0)	
1.	H17 I feel fatigued						
2.	HI12 I feel weak all over						
3.	An1 I feel listless ("washed out")						
4.	An2 I feel tired						
5.	An3 I have trouble starting things because I am tired						
6.	An4 I have trouble finishing things because I am tired						
		Very Much (0)	Quite a Bit (1)	Somewhat (2)	A Little Bit (3)	Not At All (4)	Score
7.	An5 I have energy						
8.	An7 I am able to do my usual activities						

		Not At All (4)	A Little Bit (3)	Somewhat (2)	Quite a Bit (1)	Very Much (0)	Score
9.	An8 I need to sleep during the day						
10.	An12 I am too tired to eat						
11.	An14 I need help doing my usual activities						
12.	An15 I am frustrated by being too tired to do the things I want to do						
13.	An16 I have to limit my social activity because I am tired						
Score Total							

Sources: (Maesaroh & Agung, 2020; Sihombing *et al*., 2016; Tennant, 2019)

Information:

The results of the psychometric analysis showed that items An9–An11 were more reflective of emotional aspects such as depression and loss of motivation than physical fatigue. Therefore, these three items were removed so that the FACIT-Fatigue scale version 4 instrument would focus more on measuring fatigue as a physiological and functional phenomenon. Cross-cultural validation tests also supported this removal, as item translations were unstable across languages, item-total correlations were low (<0.35), and Confirmatory Factor Analysis (CFA) results indicated that these items did not contain a dominant factor in the fatigue aspect (Acaster *et al*., 2015; Regueiro *et al*., 2025).

The questions above have been proven to be valid and reliable in measuring the level of fatigue experienced by respondents in the last 7 days, with Items are scored as follows:

4=Not at All; 3=A Little Bit; 2=Somewhat; 1=Quite A Bit; 0=Very Much, **EXCEPT** items #7 and #8 **which are reversed scored**, become 0=Not at All; 1=A Little Bit; 2=Somewhat; 3=Quite A Bit; 4=Very Much.

Score range 0-52. A score of less than 30 indicates severe fatigue. The higher the score, the better the quality of life.

Interpretation of total fatigue score categories

Score 0-29 : Severe Fatigue

Score 30-52 : Mild Fatigue

Appendix 6 Sleep Quality Questionnaire

SLEEP QUALITY QUESTIONNAIRE

PSQI (*Pittsburgh Sleep Quality Indeks*)

Filling instructions:

Put a tick (√) in one of the answer columns from the question line provided. The following questions relate to your usual sleep habits during the **past month only**. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.

Apart from questions 1 and 3, put a tick (√) on one of the answers that you think is most appropriate!					
1.	During the past month, what time have you usually gone to bed at night? BED TIME				
		≤ 15 minutes	**16-30 minutes**	**31-60 minutes**	**>60 minutes**
2.	During the past month, how long (in minutes) has it usually taken you to fall asleep each night? NUMBER OF MINUTES				
3.	During the past month, what time have you usually gotten up in the morning? GETTING UP TIME				
		>7 hours	**6-7 hours**	**5-6 hours**	**<5 hours**
4.	During the past month, how many hours of actual sleep did you get at night? (This may be different than the number of hours you spent in bed.) HOURS OF SLEEP PER NIGHT				
For each of the remaining questions, check the one best response (√). Please answer all questions.					
5.	During the past month, how often have you had trouble sleeping because you …….	**Not during the past month**	**Less than once a week**	**Once or twice a week**	**Three or more times a week**
a.	Cannot get to sleep within 30 minutes				
b.	Wake up in the middle of the night or early morning				
c.	Have to get up to use the bathroom				

d.	Cannot breathe comfortably				
e.	Cough or snore loudly				
f.	Feel too cold				
g.	Feel too hot				
h.	Had bad dreams				
i.	Have pain				
j.	➢ Other reason(s), please describe …… How often during the past month have you had trouble sleeping because of this?				
6.	During the past month, how often have you taken medicine to help you sleep (prescribed or "over the counter")?				
7.	During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?				
		Very good	**Fairly good**	**Fairly bad**	**Very bad**
8.	During the past month, how would you rate your sleep quality overall?				
		No problem at all	**Only a very slight problem**	**Some-what of a problem**	**A very big problem**
9.	During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done?				

Sources: (Alim Ikbal *et al*., 2015; Mustofa *et al*., 2022)

Component 1 score :
Component 2 score :
Component 3 score :
Component 4 score :
Component 5 score :
Component 6 score :
Component 7 score :
Score total :

Appendix 7 Sleep Quality Questionnaire Scoring Instructions

SLEEP QUALITY QUESTIONNAIRE SCORING INSTRUCTIONS

PSQI (*Pittsburgh Sleep Quality Indeks*)

No	Component	Item Number	Assessment System	
			Answer	Score
1.	Subjective sleep quality	8	Very good	0
			Fairly good	1
			Fairly bad	2
			Very bad	3
2.	Sleep duration	4	>7 hours	0
			6-7 hours	1
			5-6 hours	2
			<5 hours	3
3.	Sleep latency	2	≤15 minutes	0
			16-30 minutes	1
			31-60 minutes	2
			>60 minutes	3
		5a	Not during the past month	0
			Less than once a week	1
			Once or twice a week	2
			Three or more times a week	3
		Sum of #2 and #5a	0	0
			1-2	1
			3-4	2
			5-6	3
4.	Habitual sleep efficiency (HSE %) **Formula:** $\frac{Number\ of\ hours\ slept\ (4)}{Number\ of\ hours\ spent\ in\ bed\ (1,3)}$ x 100%	Calculate habitual sleep efficiency	>85 %	0
			75-84 %	1
			65-74 %	2
			<65 %	3
5.	Sleep disturbance	5b, 5c, 5d, 5e, 5f, 5g, 5h, 5i, 5j	Not during the past month	0
			Less than once a week	1
			Once or twice a week	2
			Three or more times a week	3
		Sum of #5b to #5j	0	0
			1-9	1

			10-18	2
			19-27	3
6.	Use of sleeping medication	6	0	0
			1-2	1
			3-4	2
			5-6	3
7.	Daytime dysfunction	7	Not during the past month	0
			Less than once a week	1
			Once or twice a week	2
			Three or more times a week	3
		9	No problem at all	0
			Only a very slight problem	1
			Somewhat of a problem	2
			A very big problem	3
		Sum of #7 and #9	0	0
			1-2	1
			3-4	2
			5-6	3

Sources: (Alim Ikbal *et al*., 2015; Mustofa *et al*., 2022)

Description of the score column:

0 = Very good

1 = Fairly good

2 = Fairly bad

3 = Very bad

To determine a final score that summarizes overall sleep quality, **add up all score values from components 1 to 7.**

Interpretation of sleep quality measurement result categories:

Good sleep quality : ≤ 5

Poor sleep quality : 6 - 21

Appendix 8 Guidelines for Calculating Interdialytic Weight Gain (IDWG)

GUIDELINES FOR CALCULATING INTERDIALYTIC WEIGHT GAIN (IDWG)

1. Record the patient's current pre-hemodialysis body weight.
2. Determine the difference between the patient's current pre-hemodialysis body weight and the post-hemodialysis body weight from the previous hemodialysis session.
3. Calculate the Interdialytic Weight Gain (IDWG) using the following formula:

$$\textbf{IDWG}\ (\%) = \frac{\text{PreHD Body Weight} - \text{Previous PostHD Body Weight}}{\text{Previous PostHD Body Weight}} \times 100\%$$

Sources: (Dewi *et al*., 2022; Ipema *et al*., 2016)

Interpretation of IDWG Percentage

0 = High risk (> 6 %)

1 = Moderate (4 % - 6 %)

2 = Mild (< 4 %)

Sources: (Wayunah, 2022)

Appendix 9 Details of Research Sample Acquisition

No	Day	Date	Shift	Sampel Didapat	Information
1.	Friday	January 02, 2026	Morning	2 persons	RSUD Harapan and Doa Bengkulu City
2.	Monday	January 05, 2026	Morning	5 persons	RSUD Harapan and Doa Bengkulu City
3.	Monday	January 26, 2026	Morning	4 persons	RSUD Harapan and Doa Bengkulu City
			Afternoon	1 person	
4.	Tuesday	January 27, 2026	Morning	4 persons	RSUD Harapan and Doa Bengkulu City
			Afternoon	6 persons	
5.	Wednesday	January 28, 2026	Morning	5 persons	RSUD Harapan and Doa Bengkulu City
			Afternoon	6 persons	
6.	Thursday	January 29, 2026	Morning	5 persons	RSUD Harapan and Doa Bengkulu City
			Afternoon	4 persons	
7.	Friday	January 30, 2026	Morning	2 persons	RSUD Harapan and Doa Bengkulu City
			Afternoon	7 persons	
8.	Saturday	January 31, 2026	Morning	4 persons	RSUD Harapan and Doa Bengkulu City
			Afternoon	6 persons	
9.	Thursday	February 05, 2026	Morning	4 persons	RSUD dr. M. Yunus Bengkulu Province
			Afternoon	9 persons	
10.	Friday	February 06, 2026	Morning	6 persons	RSUD dr. M. Yunus Bengkulu Province
			Afternoon	6 persons	
11.	Saturday	February 07, 2026	Morning	5 persons	RSUD dr. M. Yunus Bengkulu Province
			Afternoon	6 persons	
12.	Monday	February 09, 2026	Morning	6 persons	RSUD dr. M. Yunus Bengkulu Province
			Afternoon	8 persons	
13.	Tuesday	February 10, 2026	Morning	7 persons	RSUD dr. M. Yunus Bengkulu Province
			Afternoon	6 persons	
14.	Wednesday	February 11, 2026	Morning	6 persons	RSUD dr. M. Yunus Bengkulu Province
			Afternoon	6 persons	
Total				**136 persons**	RSUD Harapan and Doa Bengkulu City & RSUD dr. M. Yunus Bengkulu Province

Information:

- RSUD Harapan and Doa Bengkulu City : **61 Respondents**
- RSUD dr. M. Yunus Bengkulu Province : **75 Respondents**

Appendix 10 Research Table Master

No	Name Initials	Vascu-lar access	Age	Code_ Age	Sex	Dura tion of hemo dialys is_ye ars	Code_ Durati on of hemod ialysis	Comorb idities_ Total	Code_ Comorb idities	Hemog lobin (Hb) level	Code_ Hemo globin (Hb) level	%IDWG	Code_ IDWG	Score Sleep Quali ty	Code_ Sleep Quali ty	Score Fatigue	Code_ Fati-gue
1.	Ny. Ne	0	47	1	0	1.8	1	1	1	9	0	3.1	2	9	0	26	0
2.	Tn. Ma	0	59	0	1	0.4	2	1	1	9.2	0	3.5	2	8	0	26	0
3.	Ny. Sh	0	44	1	0	0.7	2	0	2	8.3	0	5.4	1	7	0	20	0
4.	Tn. So	0	27	2	1	1.2	1	0	2	11.1	2	5.0	1	13	0	22	0
5.	Ny. Yu	0	29	2	0	1.3	1	3	0	8.6	0	2.7	2	10	0	27	0
6.	Ny. Su	0	43	1	0	1.9	1	1	1	8.7	0	2.3	2	9	0	18	0
7.	Ny. Tu	0	33	2	0	1	1	1	1	8.2	0	5.0	1	5	1	27	0
8.	Ny. Ha	0	50	1	0	2	1	1	1	8.3	0	2.3	2	5	1	19	0
9.	Tn. Mr	0	32	2	1	0.6	2	3	0	11.3	2	2.0	2	8	0	20	0
10.	Tn. Ba	0	36	1	1	1.8	1	0	2	9.3	0	2.7	2	7	0	29	0
11.	Ny. Nu	0	42	1	0	1	1	0	2	8.1	0	3.6	2	11	0	17	0
12.	Ny. La	0	37	1	0	1.8	1	1	1	9.7	0	2.5	2	8	0	21	0
13.	Ny. Pa	0	26	2	0	1.5	1	1	1	9.6	0	4.1	1	7	0	16	0
14.	Ny. Wa	0	58	0	0	0.4	2	3	0	8.6	0	2.9	2	9	0	28	0
15.	Ny. Es	0	52	0	0	1.5	1	1	1	11.2	2	2.4	2	11	0	30	1
16.	Ny. Oj	0	44	1	0	2	1	1	1	8.1	0	4.1	1	8	0	32	1
17.	Tn. Jo	0	28	2	1	1.6	1	1	1	8.9	0	2.2	2	14	0	19	0
18.	Ny. Ri	0	53	0	0	1.1	1	0	2	8.4	0	1.7	2	8	0	28	0
19.	Ny. Na	0	45	1	0	1.1	1	0	2	9	0	5.4	1	10	0	23	0
20.	Ny. Ra	0	41	1	0	0.4	2	1	1	10.7	1	5.0	1	9	0	28	0
21.	Tn. Fz	0	44	1	1	1.3	1	0	2	8.5	0	4.1	1	5	1	16	0

22.	Tn. Bm	0	62	0	1	1.7	1	3	0	8.3	0	0.9	2	5	1	15	0
23.	Tn. Sy	0	54	0	1	1	1	0	2	9.5	0	1.3	2	11	0	30	1
24.	Ny. Ha	0	56	0	0	0.7	2	0	2	8.9	0	4.3	1	5	1	23	0
25.	Tn. Sy	0	49	1	1	0.5	2	1	1	8.7	0	2.9	2	13	0	31	1
26.	Tn. Kh	0	45	1	1	2	1	1	1	10.1	1	2.7	2	7	0	23	0
27.	Ny. Ne	0	28	2	0	0.8	2	3	0	8	0	3.4	2	14	0	21	0
28.	Tn. Yp	0	59	0	1	1.3	1	1	1	8.7	0	4.1	1	5	1	18	0
29.	Tn. Ch	0	46	1	1	1.3	1	1	1	10.8	1	5.4	1	11	0	26	0
30.	Ny. Hr	0	51	0	0	1.9	1	1	1	9.6	0	3.4	2	13	0	18	0
31.	Tn. Ma	0	32	2	1	0.8	2	2	1	8.7	0	1.5	2	9	0	16	0
32.	Ny. Re	0	40	1	0	2	1	1	1	9.3	0	2.3	2	5	1	33	1
33.	Tn. Is	0	32	2	1	1.7	1	1	1	8.2	0	5.7	1	8	0	17	0
34.	Tn. Az	0	64	0	1	2	1	1	1	9.2	0	4.1	1	5	1	33	1
35.	Tn. Nu	0	38	1	1	1	1	0	2	9.3	0	5.5	1	4	1	29	0
36.	Tn. No	0	37	1	1	1.2	1	3	0	8.3	0	5.2	1	4	1	20	0
37.	Tn. Wi	0	59	0	1	0.4	2	1	1	11.8	2	5.8	1	7	0	24	0
38.	Ny. Su	0	35	1	0	0.7	2	1	1	9.0	0	1.7	2	8	0	22	0
39.	Tn. Di	0	51	0	1	0.5	2	0	2	8.8	0	5.1	1	12	0	22	0
40.	Ny. Ri	0	27	2	0	1.6	1	1	1	9.6	0	3.4	2	3	1	31	1
41.	Ny. Sa	0	37	1	0	1.6	1	1	1	9.0	0	5.1	1	8	0	37	1
42.	Tn. Su	0	39	1	1	0.9	2	1	1	10.8	1	4.9	1	9	0	21	0
43.	Tn. Ag	0	44	1	1	0.6	2	1	1	10.5	1	4.3	1	6	0	24	0
44.	Ny. De	0	61	0	0	0.6	2	0	2	9.4	0	4.1	1	8	0	34	1
45.	Tn. He	0	28	2	1	1.2	1	0	2	8.2	0	5.3	1	8	0	20	0
46.	Tn. As	0	55	0	1	0.4	2	1	1	10.2	1	4.6	1	5	1	18	0
47.	Ny. Nu	0	45	1	0	0.3	2	1	1	8.5	0	5.8	1	7	0	19	0
48.	Tn. Er	0	55	0	1	0.6	2	0	2	9.1	0	5.3	1	3	1	32	1
49.	Ny. Id	0	60	0	0	0.9	2	3	0	8.3	0	3.6	2	6	0	25	0
50.	Tn. Su	0	56	0	1	1.2	1	1	1	8.4	0	5.6	1	8	0	25	0
51.	Ny. So	0	41	1	0	0.3	2	1	1	11.2	2	1.9	2	11	0	19	0

52.	Ny. Mi	0	39	1	0	1.1	1	1	1	9.1	0	5.1	1	5	1	23	0
53.	Ny. Wa	0	47	1	0	1.5	1	1	1	10.0	1	3.5	2	7	0	21	0
54.	Ny. Ar	0	45	1	0	6	0	0	2	10.0	1	3.5	2	7	0	27	0
55.	Ny. Ha	0	36	1	0	1	1	0	2	8.2	0	4.9	1	9	0	14	0
56.	Tn. Ek	0	60	0	1	5	0	1	1	8.0	0	5.7	1	6	0	20	0
57.	Ny. Ca	0	58	0	0	14	0	1	1	10.2	1	2.2	2	5	1	35	1
58.	Ny. Ac	0	43	1	0	4	0	1	1	8.6	0	4.9	1	4	1	29	0
59.	Ny. Ra	0	38	1	0	0.9	2	0	2	8.7	0	4.7	1	10	0	27	0
60.	Tn. Po	0	55	0	1	2	1	0	2	11.6	2	3.9	2	7	0	24	0
61.	Ny. Ha	0	41	1	0	1.7	1	1	1	10.3	1	3.7	2	1	1	26	0
62.	Tn. Ma	0	30	2	1	7	0	1	1	8.1	0	4.5	1	8	0	19	0
63.	Tn. Fe	0	50	1	1	0.6	2	1	1	8.9	0	2.7	2	8	0	24	0
64.	Tn. My	0	37	1	1	2.5	1	1	1	8.9	0	2.3	2	10	0	32	1
65.	Tn. Su	0	55	0	1	1	1	3	0	8.1	0	2.1	2	6	0	34	1
66.	Tn. Je	0	29	2	1	1.4	1	1	1	11.3	2	1.6	2	11	0	37	1
67.	Ny. Nu	0	45	1	0	7	0	1	1	12.2	2	5.3	1	8	0	35	1
68.	Tn. Er	0	31	2	1	0.4	2	1	1	8.9	0	2.9	2	4	1	20	0
69.	Ny. Fa	1	55	0	0	0.7	2	3	0	10.2	1	4.3	1	15	0	34	1
70.	Ny. Ni	1	48	1	0	2	1	0	2	11.7	2	2.2	2	7	0	31	1
71.	Ny. Ir	1	57	0	0	0.8	2	0	2	8	0	4.0	1	7	0	32	1
72.	Tn. He	1	48	1	1	2.4	1	0	2	11	1	5.6	1	12	0	33	1
73.	Tn. Yu	1	60	0	1	2	1	3	0	9.8	0	4.4	1	8	0	31	1
74.	Ny. Ua	1	44	1	0	2.2	1	1	1	8.6	0	3.2	2	8	0	38	1
75.	Ny. Nu	1	52	0	0	1.3	1	0	2	9.8	0	3.9	2	9	0	24	0
76.	Tn. Ch	1	37	1	1	2	1	1	1	9.2	0	2.4	2	12	0	27	0
77.	Ny. Zy	1	47	1	0	1.2	1	1	1	10.1	1	2.4	2	10	0	34	1
78.	Ny. Ka	1	43	1	0	1.3	1	3	0	10.7	1	0.8	2	9	0	32	1
79.	Ny. An	1	42	1	0	1.8	1	1	1	10.7	1	4.8	1	10	0	32	1
80.	Ny. El	1	49	1	0	2.2	1	1	1	9.8	0	0.7	2	11	0	24	0
81.	Ny. Tu	1	59	0	0	2.8	1	0	2	9.3	0	2.7	2	8	0	37	1

82.	Tn. Ro	1	52	0	1	2.8	1	1	1	11.8	2	1.3	2	9	0	29	0
83.	Ny. Su	1	52	0	0	0.9	2	3	0	8.2	0	4.1	1	8	0	30	1
84.	Tn. En	1	46	1	1	2.2	1	0	2	8.1	0	3.6	2	10	0	32	1
85.	Ny. Fe	1	32	2	0	1.6	1	0	2	8.6	0	3.7	2	7	0	22	0
86.	Ny. Na	1	41	1	0	1.2	1	1	1	9.1	0	6.0	1	8	0	35	1
87.	Ny. Li	1	54	0	0	3.2	0	3	0	9.8	0	3.1	2	9	0	35	1
88.	Tn. An	1	57	0	1	2.1	1	1	1	8.4	0	3.0	2	8	0	39	1
89.	Tn. Bu	1	55	0	1	2.3	1	0	2	8.3	0	3.3	2	7	0	27	0
90.	Tn. Ic	1	39	1	1	3.7	0	0	2	8	0	4.7	1	8	0	26	0
91.	Tn. Br	1	46	1	1	3.1	0	1	1	8.4	0	3.7	2	8	0	30	1
92.	Tn. Ap	1	53	0	1	1.8	1	3	0	9.2	0	5.1	1	6	0	21	0
93.	Ny. Zn	1	47	1	0	2.3	1	0	2	8.7	0	2.1	2	14	0	29	0
94.	Tn. Jd	1	36	1	1	2.5	1	1	1	11.3	2	3.6	2	8	0	34	1
95.	Ny. Es	1	35	1	0	1.5	1	1	1	8.5	0	5.5	1	8	0	34	1
96.	Ny. Kk	1	59	0	0	1.6	1	0	2	8	0	0.8	2	5	1	29	0
97.	Tn. Ap	1	49	1	1	1.7	1	0	2	11.1	2	4.2	1	6	0	28	0
98.	Ny. Yu	1	54	0	0	1.9	1	1	1	11	1	4.7	1	7	0	31	1
99.	Ny. Ll	1	36	1	0	0.8	2	2	1	10.7	1	2.0	2	5	1	37	1
100.	Tn. Ir	1	52	0	1	0.5	2	1	1	8.9	0	5.5	1	5	1	40	1
101.	Ny. Li	1	46	1	0	1	1	1	1	8.9	0	3.4	2	7	0	28	0
102.	Ny. Ro	1	56	0	0	0.6	2	1	1	11.1	2	1.8	2	5	1	32	1
103.	Ny. An	1	53	0	0	1	1	0	2	9.4	0	4.9	1	8	0	18	0
104.	Ny. Su	1	59	0	0	1.6	1	0	2	9.1	0	4.6	1	9	0	26	0
105.	Tn. Aj	1	25	2	1	7	0	1	1	8.1	0	4.6	1	7	0	34	1
106.	Tn. Sa	1	55	0	1	3.5	0	1	1	9.7	0	2.2	2	7	0	35	1
107.	Tn. Mu	1	49	1	1	1	1	1	1	10.2	1	5.0	1	7	0	35	1
108.	Tn. Al	1	40	1	1	0.7	2	1	1	8.2	0	5.4	1	6	0	39	1
109.	Ny. Es	1	45	1	0	1.1	1	3	0	8.5	0	5.5	1	6	0	33	1
110.	Tn. Ak	1	31	2	1	0.9	2	1	1	8.3	0	2.7	2	5	1	42	1
111.	Tn. Kh	1	55	0	1	1.3	1	1	1	8.8	0	1.5	2	3	1	30	1

112.	Tn. Ro	1	60	0	1	0.8	2	1	1	11.8	2	2.8	2	9	0	47	1
113.	Ny. Wa	1	64	0	0	12	0	1	1	8.9	0	2.2	2	7	0	27	0
114.	Ny. Mu	1	52	0	0	8	0	1	1	8.1	0	2.5	2	6	0	34	1
115.	Ny. Le	1	28	2	0	4	0	1	1	8.6	0	5.5	1	7	0	36	1
116.	Tn. Ef	1	50	1	1	13	0	1	1	8.7	0	2.0	2	5	1	27	0
117.	Tn. Mi	1	63	0	1	2	1	1	1	8.8	0	4.2	1	6	0	29	0
118.	Tn. In	1	34	2	1	2	1	1	1	8.9	0	4.8	1	9	0	17	0
119.	Tn. Nu	1	59	0	1	4.5	0	3	0	9.6	0	1.9	2	5	1	33	1
120.	Ny. Ro	1	45	1	0	0.5	2	1	1	8.6	0	3.7	2	7	0	30	1
121.	Ny. Li	1	42	1	0	1.4	1	1	1	8.4	0	5.7	1	10	0	35	1
122.	Ny. Ma	1	56	0	0	0.6	2	1	1	8.2	0	3.7	2	4	1	34	1
123.	Ny. Su	1	57	0	0	0.5	2	1	1	11.1	2	3.7	2	10	0	30	1
124.	Tn. Sa	1	54	0	1	1.9	1	1	1	9.5	0	4.2	1	7	0	34	1
125.	Ny. Et	1	62	0	0	1	1	0	2	10.7	1	5.0	1	9	0	39	1
126.	Ny. Ka	1	47	1	0	0.4	2	1	1	9.5	0	4.7	1	2	1	40	1
127.	Tn. Su	1	61	0	1	0.7	2	1	1	9.6	0	4.0	2	6	0	27	0
128.	Ny. As	1	43	1	0	1.3	1	3	0	9.4	0	2.1	2	4	1	26	0
129.	Ny. Si	1	43	1	0	0.4	2	0	2	10.7	1	5.7	1	6	0	24	0
130.	Ny. Se	1	43	1	0	0.6	2	1	1	9.7	0	2.4	2	8	0	36	1
131.	Tn. Di	1	60	0	1	0.5	2	1	1	8.4	0	5.9	1	9	0	40	1
132.	Tn. Sa	1	41	1	1	0.7	2	1	1	8.7	0	4.6	1	3	1	47	1
133.	Ny. Li	1	33	2	0	1.2	1	0	2	9.8	0	4.7	1	4	1	31	1
134.	Tn. Ri	1	56	0	1	2	1	0	2	10.5	1	3.2	2	6	0	40	1
135.	Ny. Mi	1	48	1	0	0.8	2	3	0	10.5	1	4.3	1	6	0	36	1
136.	Tn. IG	1	24	2	1	0.5	2	1	1	9.8	0	2.2	2	6	0	30	1

Appendix 11 SPSS Statistical Analysis Output

A. Frequency Distribution Analysis of Categorical Respondent Characteristics in the AVF and CDL Groups

Statistics									
		Respondents by Hemodialysis Vascular Access Type	Respondents' Age (Years)	Respondents' Sex	Respondents Duration of Hemodialysis (Years)	Respondents Comorbidities	Respondents' Hemoglobin (Hb) Levels	Respondents' Interdialytic Weight Gain (IDWG) Percentage	Respondents' Sleep Quality
N	Valid	136	136	136	136	136	136	136	136
	Missing	0	0	0	0	0	0	0	0

Respondents by Hemodialysis Vascular Access Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CDL Vascular Access	68	50.0	50.0	50.0
	AVF Vascular Access	68	50.0	50.0	100.0
	Total	136	100.0	100.0	

Respondents' Age (Years)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	> 50 Years	52	38.2	38.2	38.2
	35-50 Years	63	46.3	46.3	84.6
	< 35 Years	21	15.4	15.4	100.0
	Total	136	100.0	100.0	

Respondents' Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	73	53.7	53.7	53.7
	Male	63	46.3	46.3	100.0
	Total	136	100.0	100.0	

Respondents Duration of Hemodialysis (Years)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	> 3 Years	16	11.8	11.8	11.8
	1-3 Years	77	56.6	56.6	68.4
	< 1 Years	43	31.6	31.6	100.0
	Total	136	100.0	100.0	

Respondents Comorbidities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	≥ 3 Comorbidities	18	13.2	13.2	13.2
	1-2 Comorbidities	82	60.3	60.3	73.5
	None Comorbidities	36	26.5	26.5	100.0
	Total	136	100.0	100.0	

Respondents' Hemoglobin (Hb) Levels

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7.0 - < 10.0 g/dl	99	72.8	72.8	72.8
	10.0 - 11.0 g/dl	22	16.2	16.2	89.0
	> 11.0 g/dl	15	11.0	11.0	100.0
	Total	136	100.0	100.0	

Respondents' Interdialytic Weight Gain (IDWG) Percentage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4%-6% / Moderate	64	47.1	47.1	47.1
	<4% / Mild	72	52.9	52.9	100.0

	Total	136	100.0	100.0	

Respondents' Sleep Quality					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor sleep quality	105	77.2	77.2	77.2
	Good sleep quality	31	22.8	22.8	100.0
	Total	136	100.0	100.0	

B. Descriptive Statistical Analysis of Numerical Respondent Characteristics in the AVF and CDL Groups (Mean, Median, Minimum–Maximum, Standard Deviation, and 95% Confidence Interval for the Mean)

Descriptives				
			Statistic	Std. Error
Respondents' Age (Years)	*Mean*		46.10	.879
	95% Confidence Interval for *Mean*	Lower Bound	44.37	
		Upper Bound	47.84	
	5% Trimmed *Mean*		46.29	
	Median		46.00	
	Variance		104.967	
	Std. Deviation		10.245	
	Minimum		24	
	Maximum		64	
	Range		40	
	Interquartile Range		17	
	Skewness		-.259	.208
	Kurtosis		-.880	.413
Respondents' Duration of Hemodialysis (Years)	*Mean*		1.356	.0596
	95% Confidence Interval for *Mean*	Lower Bound	1.238	
		Upper Bound	1.474	
	5% Trimmed *Mean*		1.314	
	Median		1.250	
	Variance		.483	

	Std. Deviation		.6949	
	Minimum		.3	
	Maximum		3.7	
	Range		3.4	
	Interquartile Range		1.1	
	Skewness		.767	.208
	Kurtosis		.556	.413
Respondents' Hemoglobin (Hb) Levels	*Mean*		9.368	.0921
	95% Confidence Interval for *Mean*	Lower Bound	9.186	
		Upper Bound	9.550	
	5% Trimmed *Mean*		9.310	
	Median		9.100	
	Variance		1.153	
	Std. Deviation		1.0738	
	Minimum		8.0	
	Maximum		12.2	
	Range		4.2	
	Interquartile Range		1.6	
	Skewness		.730	.208
	Kurtosis		-.481	.413
Respondents' Interdialytic Weight Gain (IDWG) Percentage	*Mean*		3.701	.1174
	95% Confidence Interval for *Mean*	Lower Bound	3.469	
		Upper Bound	3.934	
	5% Trimmed *Mean*		3.733	
	Median		3.700	
	Variance		1.875	
	Std. Deviation		1.3692	
	Minimum		.7	
	Maximum		6.0	
	Range		5.3	
	Interquartile Range		2.5	
	Skewness		-.228	.208
	Kurtosis		-.999	.413
Respondents' Total Sleep Quality Scores	*Mean*		7.56	.223
	95% Confidence Interval for *Mean*	Lower Bound	7.12	
		Upper Bound	8.00	

	5% Trimmed *Mean*	7.49	
	Median	7.50	
	Variance	6.737	
	Std. Deviation	2.596	
	Minimum	1	
	Maximum	15	
	Range	14	
	Interquartile Range	3	
	Skewness	.394	.208
	Kurtosis	.330	.413

C. Homogeneity Analysis of Categorical Respondent Characteristics Between the AVF and CDL Groups

1. Age Characteristic Categories

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.399[a]	2	.111
Likelihood Ratio	4.457	2	.108
Linear-by-Linear Association	4.351	1	.037
N of Valid Cases	136		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.50.			

2. Sex Characteristic Categories

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.266[a]	1	.606		
Continuity Correction[b]	.118	1	.731		
Likelihood Ratio	.266	1	.606		
Fisher's Exact Test				.731	.366
Linear-by-Linear Association	.264	1	.607		
N of Valid Cases	136				
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 31.50.					
b. Computed only for a 2x2 table					

3. Duration of Hemodialysis Characteristic Categories

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.222[a]	2	.543
Likelihood Ratio	1.233	2	.540
Linear-by-Linear Association	.907	1	.341
N of Valid Cases	136		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.00.			

4. Comorbidities Characteristic Categories

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.271[a]	2	.873
Likelihood Ratio	.271	2	.873
Linear-by-Linear Association	.077	1	.782
N of Valid Cases	136		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.00.			

5. Hemoglobin (Hb) Level Characteristic Categories

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.259[a]	2	.879
Likelihood Ratio	.259	2	.879
Linear-by-Linear Association	.000	1	1.000
N of Valid Cases	136		
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.50.			

6. **Interdialytic Weight Gain (IDWG) Percentage Characteristic Categories**

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.118[a]	1	.731		
Continuity Correction[b]	.030	1	.864		
Likelihood Ratio	.118	1	.731		
Fisher's Exact Test				.864	.432
Linear-by-Linear Association	.117	1	.732		
N of Valid Cases	136				
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 32.00.					
b. Computed only for a 2x2 table					

7. **Sleep Quality Characteristic Categories**

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.045[a]	1	.307		
Continuity Correction[b]	.669	1	.414		
Likelihood Ratio	1.048	1	.306		
Fisher's Exact Test				.414	.207
Linear-by-Linear Association	1.037	1	.309		
N of Valid Cases	136				
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 15.50.					
b. Computed only for a 2x2 table					

D. Frequency Distribution Analysis of Fatigue Severity Categories in the AVF and CDL Groups

1. AVF >< CDL

Fatigue Severity Categories					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Severe Fatigue	74	54.4	54.4	54.4
	Mild Fatigue	62	45.6	45.6	100.0
	Total	136	100.0	100.0	

2. CDL

Fatigue Severity Categories					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Severe Fatigue	53	77.9	77.9	77.9
	Mild Fatigue	15	22.1	22.1	100.0
	Total	68	100.0	100.0	

3. AVF

Fatigue Severity Categories					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Severe Fatigue	21	30.9	30.9	30.9
	Mild Fatigue	47	69.1	69.1	100.0
	Total	68	100.0	100.0	

E. Descriptive Statistical Analysis of Fatigue Scores in the AVF and CDL Groups (Mean, Median, Minimum–Maximum, Standard Deviation, and 95% Confidence Interval for the Mean)

1. AVF >< CDL

Descriptives				
			Statistic	Std. Error
Total Fatigue Scores of the Respondents	*Mean*		28.26	.600
	95% Confidence Interval for *Mean*	Lower Bound	27.07	
		Upper Bound	29.44	
	5% Trimmed *Mean*		28.17	
	Median		29.00	
	Variance		49.022	
	Std. Deviation		7.002	
	Minimum		14	
	Maximum		47	
	Range		33	
	Interquartile Range		11	
	Skewness		.091	.208
	Kurtosis		-.473	.413

2. CDL

Descriptives					
	Distribution of Respondents by Hemodialysis Vascular Access Type			Statistic	Std. Error
Total Fatigue Scores of the Respondents	CDL Vascular Access	*Mean*		24.49	.719
		95% Confidence Interval for *Mean*	Lower Bound	23.05	
			Upper Bound	25.92	
		5% Trimmed *Mean*		24.36	
		Median		24.00	
		Variance		35.119	
		Std. Deviation		5.926	
		Minimum		14	
		Maximum		37	
		Range		23	

		Interquartile Range	9	
		Skewness	.331	.291
		Kurtosis	-.835	.574

3. AVF

Descriptives					
	Distribution of Respondents by Hemodialysis Vascular Access Type			Statistic	Std. Error
Total Fatigue Scores of the Respondents	AVF Vascular Access	*Mean*		32.03	.715
		95% Confidence Interval for *Mean*	Lower Bound	30.60	
			Upper Bound	33.46	
		5% Trimmed *Mean*		32.05	
		Median		32.00	
		Variance		34.775	
		Std. Deviation		5.897	
		Minimum		17	
		Maximum		47	
		Range		30	
		Interquartile Range		7	
		Skewness		-.005	.291
		Kurtosis		.541	.574

F. Normality Test of Fatigue Scores in the AVF and CDL Groups

1. CDL

Tests of Normality							
	Distribution of Respondents by Hemodialysis Vascular Access Type	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Total Fatigue Scores of the Respondents	CDL Vascular Access	.104	68	.065	.965	68	.054
a. Lilliefors Significance Correction							

2. AVF

Tests of Normality							
	Distribution of Respondents by Hemodialysis Vascular Access Type	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Total Fatigue Scores of the Respondents	AVF Vascular Access	.072	68	.200*	.986	68	.630
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

3. Total AVF >< CDL

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total Fatigue Scores of the Respondents	.063	136	.200*	.983	136	.091
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

G. Homogeneity Test of Fatigue Scores Between the AVF and CDL Groups

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of *Means*						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	*Mean* Difference	Std. Error Difference	Lower	Upper
Total Fatigue Scores of the Respondents	Equal variances assumed	.627	.430	-7.441	134	.000	-7.544	1.014	-9.549	-5.539
	Equal variances not assumed			-7.441	133.997	.000	-7.544	1.014	-9.549	-5.539

H. Hypothesis Testing of the Difference in Mean Fatigue Scores Between the AVF and CDL Groups

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of *Means*						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	*Mean* Difference	Std. Error Difference	Lower	Upper
Total Fatigue Scores of the Respondents	Equal variances assumed	.627	.430	-7.441	134	.000	-7.544	1.014	-9.549	-5.539
	Equal variances not assumed			-7.441	133.997	.000	-7.544	1.014	-9.549	-5.539

Appendix 12 Research Documentation

A. Photographic Documentation at Dr. M. Yunus Regional General Hospital, Bengkulu Province

Photograph of the informed consent process






Photograph of participants signing the informed consent form





Photograph of the guided questionnaire interview






B. Photographic Documentation at Harapan dan Doa Regional General Hospital, Bengkulu City

Photograph of the informed consent process





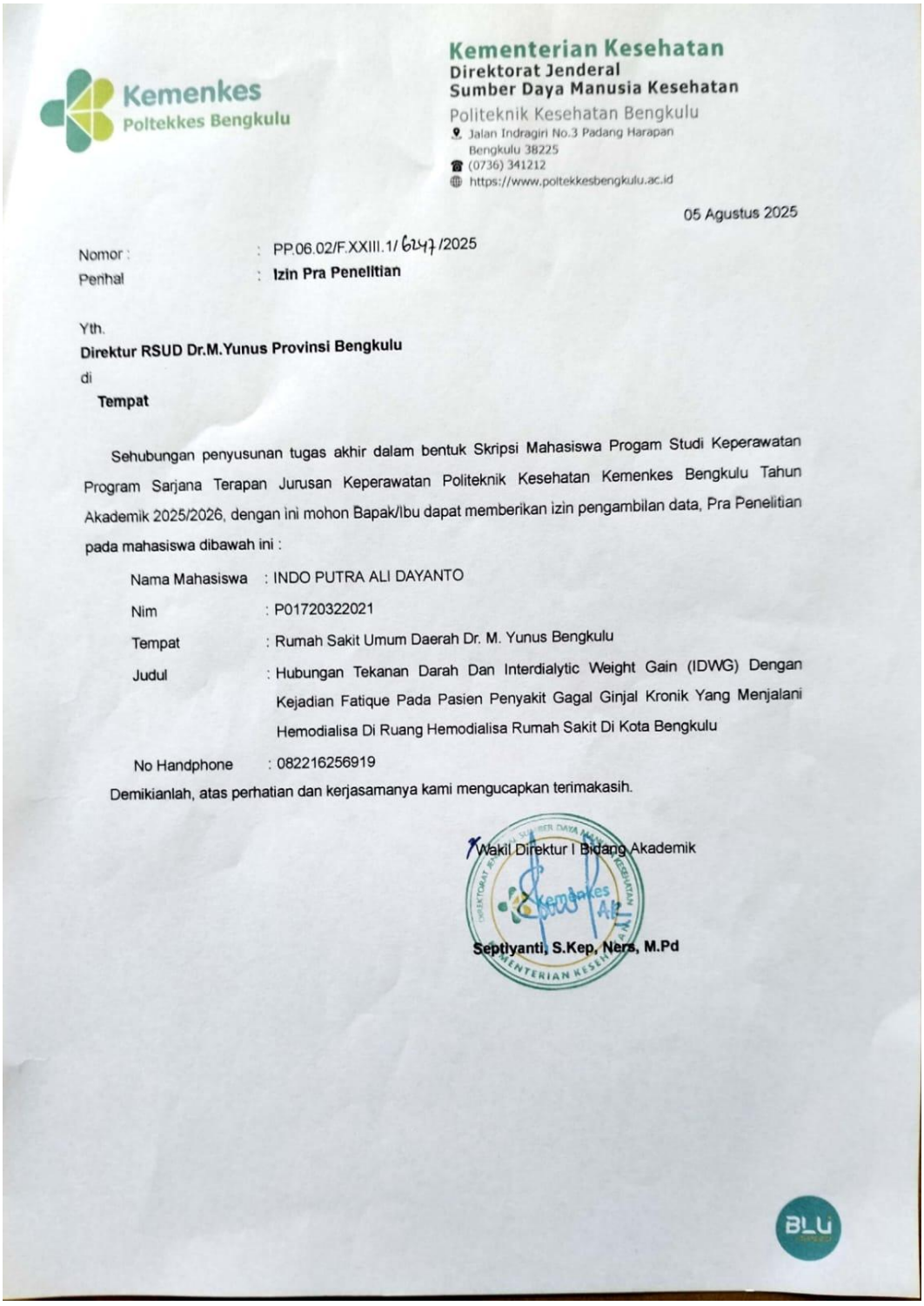
Photograph of participants signing the informed consent form






Photograph of the guided questionnaire interview

Appendix 13 Preliminary Research Introduction Letter for Dr. M. Yunus Regional General Hospital, Bengkulu Province



Kementerian Kesehatan
Direktorat Jenderal
Sumber Daya Manusia Kesehatan
Politeknik Kesehatan Bengkulu
Jalan Indragiri No.3 Padang Harapan
Bengkulu 38225
(0736) 341212
https://www.poltekkesbengkulu.ac.id

Kemenkes
Poltekkes Bengkulu

05 Agustus 2025

Nomor : PP.06.02/F.XXIII.1/6247/2025
Perihal : **Izin Pra Penelitian**

Yth.
Direktur RSUD Dr.M.Yunus Provinsi Bengkulu
di
Tempat

Sehubungan penyusunan tugas akhir dalam bentuk Skripsi Mahasiswa Progam Studi Keperawatan Program Sarjana Terapan Jurusan Keperawatan Politeknik Kesehatan Kemenkes Bengkulu Tahun Akademik 2025/2026, dengan ini mohon Bapak/Ibu dapat memberikan izin pengambilan data, Pra Penelitian pada mahasiswa dibawah ini :

Nama Mahasiswa	: INDO PUTRA ALI DAYANTO
Nim	: P01720322021
Tempat	: Rumah Sakit Umum Daerah Dr. M. Yunus Bengkulu
Judul	: Hubungan Tekanan Darah Dan Interdialytic Weight Gain (IDWG) Dengan Kejadian Fatique Pada Pasien Penyakit Gagal Ginjal Kronik Yang Menjalani Hemodialisa Di Ruang Hemodialisa Rumah Sakit Di Kota Bengkulu
No Handphone	: 082216256919

Demikianlah, atas perhatian dan kerjasamanya kami mengucapkan terimakasih.

Wakil Direktur I Bidang Akademik

Septiyanti, S.Kep, Ners, M.Pd

Appendix 14 Preliminary Research Introduction Letter for Harapan dan Doa Regional General Hospital, Bengkulu City

PEMERINTAH KOTA BENGKULU
DINAS KESEHATAN

Jl. Letjen Basuki Rahmat No. 8 Kel. Belakang Pondok Kec. Ratu Samban
Kota Bengkulu Telp. 085216000810 Email dinkeskotabengkulu1@gmail.com,
www.dinkes.bengkulukota.go.id Kode Pos 34223

REKOMENDASI

Nomor : 000.9.2/ 1765 /D.Kes/2025

Dasar Surat Wakil Direktur I Bidang Akademik Poltekkes Kemenkes Bengkulu Nomor: PP.06.02/F.XXIII.1/6243/2025 Tanggal 5 Agustus 2025 Perihal : Permohonan Izin Pengambilan data untuk penyusunan tugas proposal skipsi atas nama

Nama	:	**Indo Putra Ali Dayanto**
NPM	:	**P01720322021**
Program Studi	:	Sarjana Terapan Keperawatan
Judul/Data		Hubungan Tekanan Darah dan Interdialytic Wieght Gain (IDWG) Dengan Kejadian Fatique Pada Pasien Penyakit Gagal Ginjal Kronik Yang Menjalani Hemodialisa Di Ruangan Hemodialisa Rumah Sakit Di Kota Bengkulu
Tempat penelitian	:	1. Dinas Kesehatan Kota Bengkulu 2. RSUD Harapan dan Doa Kota Bengkulu
Lama Kegiatan	:	08 Agustus 2025 s/d. 19 Agustus 2025

Pada prinsipnya Dinas Kesehatan Kota Bengkulu tidak berkeberatan diadakan pra penelitian/kegiatan yang dimaksud dengan catatan ketentuan :

a. Tidak dibenarkan mengadakan kegiatan yang tidak sesuai dengan penelitian yang dimaksud.
b. Harap mentaati semua ketentuan yang berlaku serta mengindahkan adat istiadat setempat.
c. Apabila masa berlaku Rekomendasi Pra Penelitian ini sudah berakhir, sedangkan pelaksanaan belum selesai maka yang bersangkutan harus mengajukan surat perpanjangan Rekomendasi Pra Penelitian.
d. Setelah selesai mengadakan kegiatan diatas agar melapor kepada Kepala Dinas Kesehatan Kota Bengkulu (tembusan).
e. Surat Rekomendasi Pra Penelitian ini akan dicabut kembali dan dinyatakan tidak berlaku apabila ternyata pemegang surat ini tidak mentaati ketentuan seperti tersebut diatas.

Demikianlah Rekomendasi ini dikeluarkan untuk dapat dipergunakan sebagaimana mestinya.

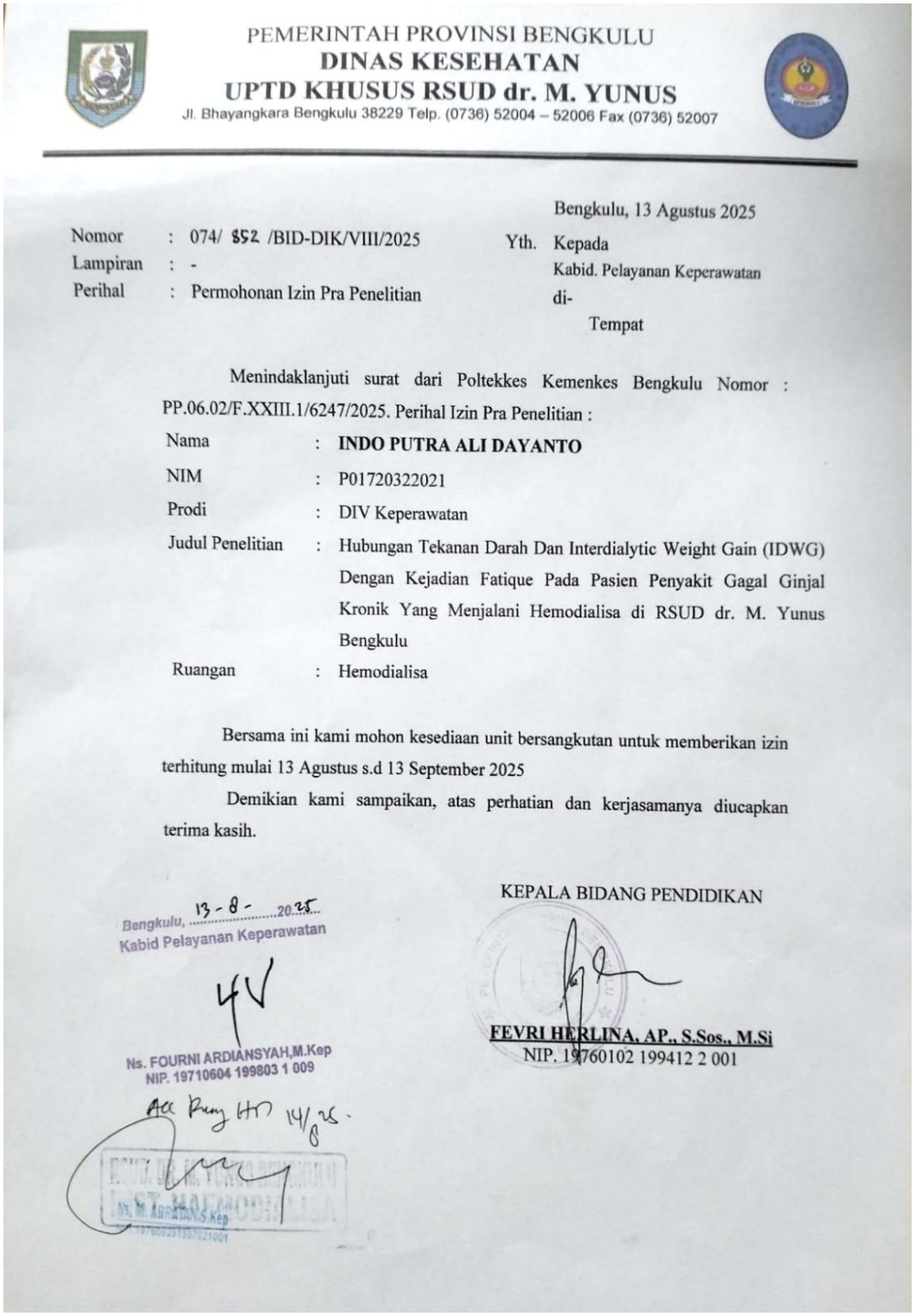
Bengkulu, 08 Agustus 2025

a.n.Kepala Dinas Kesehatan
Kota Bengkulu
Kabid Kesehatan Masyarakat

Nelli Hartati, SKM, MM
Pembina, IV/a
NIP.197204191991012001

Tembusan :
1.Yth. Direktur RSUD Harapan dan Doa Kota Bengkulu
2.Yang Bersangkutan

Appendix 15 Preliminary Research Approval Letter from the Hemodialysis Unit of Dr. M. Yunus Regional General Hospital, Bengkulu Province



PEMERINTAH PROVINSI BENGKULU
DINAS KESEHATAN
UPTD KHUSUS RSUD dr. M. YUNUS
Jl. Bhayangkara Bengkulu 38229 Telp. (0736) 52004 – 52006 Fax (0736) 52007

Bengkulu, 13 Agustus 2025

Nomor : 074/ 852 /BID-DIK/VIII/2025
Lampiran : -
Perihal : Permohonan Izin Pra Penelitian

Yth. Kepada
Kabid. Pelayanan Keperawatan
di-
Tempat

Menindaklanjuti surat dari Poltekkes Kemenkes Bengkulu Nomor : PP.06.02/F.XXIII.1/6247/2025. Perihal Izin Pra Penelitian :

Nama	:	**INDO PUTRA ALI DAYANTO**
NIM	:	P01720322021
Prodi	:	DIV Keperawatan
Judul Penelitian	:	Hubungan Tekanan Darah Dan Interdialytic Weight Gain (IDWG) Dengan Kejadian Fatique Pada Pasien Penyakit Gagal Ginjal Kronik Yang Menjalani Hemodialisa di RSUD dr. M. Yunus Bengkulu
Ruangan	:	Hemodialisa

Bersama ini kami mohon kesediaan unit bersangkutan untuk memberikan izin terhitung mulai 13 Agustus s.d 13 September 2025

Demikian kami sampaikan, atas perhatian dan kerjasamanya diucapkan terima kasih.

KEPALA BIDANG PENDIDIKAN

FEVRI HERLINA, AP., S.Sos., M.Si
NIP. 19760102 199412 2 001

Bengkulu, 13-8-2025
Kabid Pelayanan Keperawatan

Ns. FOURNI ARDIANSYAH,M.Kep
NIP. 19710604 199803 1 009

Acc Ruang HD 14/8/25

Appendix 16 Preliminary Research Approval Letter from the Hemodialysis Unit of Harapan dan Doa Regional General Hospital, Bengkulu City

PEMERINTAH KOTA BENGKULU
RUMAH SAKIT UMUM DAERAH HARAPAN DAN DOA
Jl. Letjend. Basuki Rahmat No.01| Bengkulu 38223
(0736) 34 5100|Fax (0736) 345 100 |kotabengkulursud@gmail.com

SURAT IZIN PRA PENELITIAN

Nomor : 000.9.2/254/RSUD-HD_SI/2025

Dasar :
a. Surat Permohonan Izin Pra Penelitian dari Mahasiswa Prodi Sarjana Terapan Jurusan Keperawatan Poltekkes Kemenkes Bengkulu Tahun Akademik 2024/2025 Nomor: PP.06.02/FXXXI.1/6246/2025 tanggal 05 Agustus 2025
b. Surat Rekomendasi dari Dinas Kesehatan Kota Bengkulu Nomor: 000.9.2/1765/D.Kes/2025 Tanggal 08 Agustus 2025

DENGAN INI MEMBERIKAN IZIN KEPADA

Nama	:	Indo Putra Ali Dayanto
NPM	:	P01720322021
Program Studi	:	D IV Keperawatan
Ruangan Pra Penelitian	:	Hemodialisa
Judul Pra Penelitian	:	Hubungan Tekanan Darah dan Interdialytic Weight Gain (IDWG) Dengan Kejadian Fatique Pada Pasien Penyakit Gagal Ginjal Kronik yang Menjalani Hemodialisa di Ruang Hemodialisa RSUD Harapan dan Doa Kota Bengkulu Tahun 2025
Waktu Pra Penelitian	:	**12 Agustus 2025 s/d 20 Agustus 2025**
Dengan Ketentuan	:	1. Tidak Boleh Mengakses Rekam Medis Pasien Dan Menyebar Luaskan Data Pasien 2. Tidak diperkenankan mengambil Gambar Foto/Video/Audio di area pelayanan rumah sakit sesuai undang – undang Praktik Kedokteran No.29/2004, Pasal 48 dan 51 dan Undang – undang Telekomunikasi No. 36/1999, Pasal 40. 3. Tidak diperkenankan memeriksakan sampel Darah, Dahak, dan Feses di laboraturium RSUD Harapan dan Doa Kota Bengkulu 4. Harus mentaati peraturan Perundang – undangan yang berlaku serta mengindahkan adat istiadat setempat. 5. Tidak memaksa, dan menggangu jam kerja atau jam pelayanan Karyawan di RSUD Harapan dan Doa Kota Bengkulu 6. Apabila masa berlaku Izin Penelitian ini sudah berakhir, sedangkan pelaksanaan belum selesai maka yang bersangkutan harus mengajukan surat perpanjangan Izin Pra Penelitian ke Bagian Diklat RSUD Harapan dan Doa Kota Bengkulu. 7. Surat Izin Penelitian ini akan dicabut kembali dan dinyatakan tidak berlaku apabila ternyata pemegang surat ini tidak mentaati ketentuan dari RSUD Harapan dan Doa Kota Bengkulu..

Demikianlah Surat Izin Pra Penelitian ini dikeluarkan, untuk dipergunakan sebagaimana mestinya.

Bengkulu, 12 Agustus 2025
Direktur UPTD Rumah Sakit Umum Daerah
Harapan dan Doa Kota Bengkulu,

dr. Lista Cerlyviera. MM
Pembina TK. I (IV/b)
NIP. 196907041999032003

Dokumen ini telah ditandatangani secara elektronik menggunakan sertifikat elektronik
yang diterbitkan oleh Balai Besar Sertifikasi Elektronik (BSrE), Badan Siber dan Sandi Negara (BSSN).

Appendix 17 Research Ethics Approval Certificate

Kementerian Kesehatan
Poltekkes Bengkulu
Jalan Indragiri No. 3 Padang Harapan
Bengkulu 38225
(0736) 341212
https://poltekkesbengkulu.ac.id

KETERANGAN LAYAK ETIK
DESCRIPTION OF ETHICAL EXEMPTION
"ETHICAL EXEMPTION"

No.KEPK.BKL/791/12/2025

Protokol penelitian versi 1 yang diusulkan oleh :
The research protocol proposed by

Peneliti utama : Indo Putra Ali Dayanto
Principal In Investigator

Nama Institusi : Program Studi Sarjana Terapan Keperawatan, Poltekkes Kemenkes Bengkulu
Name of the Institution

Dengan judul:
Title
"Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu Tahun 2026"

"Comparison of Fatigue Levels Among Chronic Kidney Disease Patients Undergoing Hemodialysis via Arteriovenous Fistula (AVF) versus Double-Lumen Catheter (DLC) Access at the Hemodialysis Unit of Bengkulu Regional General Hospital 2026"

Dinyatakan layak etik sesuai 7 (tujuh) Standar WHO 2011, yaitu 1) Nilai Sosial, 2) Nilai Ilmiah, 3) Pemerataan Beban dan Manfaat, 4) Risiko, 5) Bujukan/Eksploitasi, 6) Kerahasiaan dan Privacy, dan 7) Persetujuan Setelah Penjelasan, yang merujuk pada Pedoman CIOMS 2016. Hal ini seperti yang ditunjukkan oleh terpenuhinya indikator setiap standar.

Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011 Standards, 1) Social Values, 2) Scientific Values, 3) Equitable Assessment and Benefits, 4) Risks, 5) Persuasion/Exploitation, 6) Confidentiality and Privacy, and 7) Informed Concent, referring to the 2016 CIOMS Guidelines. This is as indicated by the fulfillment of the indicators of each standard.

Pernyataan Laik Etik ini berlaku selama kurun waktu tanggal 26 Desember 2025 sampai dengan tanggal 26 Desember 2026.

This declaration of ethics applies during the period December 26, 2025 until December 26, 2026.

December 26, 2025
Chairperson,

apt. Zamharira Muslim, M.Farm

Appendix 18 Research Permit Introduction Letter for Dr. M. Yunus Regional General Hospital, Bengkulu Province

Kemenkes
Poltekkes Bengkulu

Kementerian Kesehatan
Direktorat Jenderal
Sumber Daya Manusia Kesehatan
Politeknik Kesehatan Bengkulu
Jalan Indragiri No.3 Padang Harapan
Bengkulu 38225
(0736) 341212
https://www.poltekkesbengkulu.ac.id

22 Januari 2026

Nomor : : PP. 01.01/F.XXIII.1/ 364 /2026
Perihal : **Izin Penelitian**

Yth,
Direktur RSUD dr. M. Yunus Provinsi Bengkulu
di
Tempat

Sehubungan penyusunan tugas akhir mahasiswa dalam bentuk Skripsi Progam Studi Keperawatan Program Sarjana Terapan Jurusan Keperawatan Politeknik Kesehatan Kemenkes Bengkulu Tahun Akademik 2025/2026 , dengan ini kami mohon Bapak/Ibu dapat memberikan izin pengambilan data untuk penelitian kepada:

Nama	: INDO PUTRA ALI DAYANTO
NIM	: P01720322021
Tempat Penelitian	: Rumah Sakit Umum Daerah dr. M. Yunus Provinsi Bengkulu
Waktu Penelitian	: 01 s.d. 28 Februari 2026
Judul	: Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu Tahun 2026
No Handphone	: 082216256919

Demikianlah, atas perhatian dan kesediaan Bapak/Ibu diucapkan terimakasih.

a.n. Direktur Poltekkes Kemenkes Bengkulu
Wakil Direktur I Bidang Akademik

Septiyanti, S.Kep, Ners, M.Pd

Appendix 19 Research Permit Introduction Letter for Harapan dan Doa Regional General Hospital, Bengkulu City

Kementerian Kesehatan
Direktorat Jenderal
Sumber Daya Manusia Kesehatan
Politeknik Kesehatan Bengkulu
Jalan Indragiri No.3 Padang Harapan
Bengkulu 38225
(0736) 341212
https://www.poltekkesbengkulu.ac.id

Kemenkes
Poltekkes Bengkulu

28 Desember 2025

Nomor : PP. 01.01/F.XXIII.1/9626/2025
Perihal : **Izin Penelitian**

Yth,
Direktur UPTD Rumah Sakit Umum Daerah Harapan dan Doa Kota Bengkulu
di
Tempat

Sehubungan penyusunan tugas akhir mahasiswa dalam bentuk Skripsi Progam Studi Keperawatan Program Sarjana Terapan Jurusan Keperawatan Politeknik Kesehatan Kemenkes Bengkulu Tahun Akademik 2025/2026 , dengan ini kami mohon Bapak/Ibu dapat memberikan izin pengambilan data untuk penelitian kepada:

Nama	: INDO PUTRA ALI DAYANTO
NIM	: P01720322021
Tempat Penelitian	: Rumah Sakit Umum Daerah Harapan dan Doa Kota Bengkulu
Waktu Penelitian	: 01 Januari 2026 s/d 01 Februari 2026
Judul	: Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu Tahun 2026
No Handphone	: 082216256919

Demikianlah, atas perhatian dan kesediaan Bapak/Ibu diucapkan terimakasih.

a.n. Direktur Poltekkes Kemenkes Bengkulu
Wakil Direktur I Bidang Akademik

Septiyanti, S.Kep, Ners, M.Pd

Appendix 20 Research Permit Introduction Letter to the Bengkulu Provincial Investment and One-Stop Integrated Services Office (DPMPTSP)

Kementerian Kesehatan
Direktorat Jenderal
Sumber Daya Manusia Kesehatan
Politeknik Kesehatan Bengkulu
Jalan Indragiri No.3 Padang Harapan
Bengkulu 38225
(0736) 341212
https://www.poltekkesbengkulu.ac.id

Kemenkes
Poltekkes Bengkulu

22 Januari 2026

Nomor : : PP. 01.01/F.XXIII.1/ 365 /2026
Perihal : **Izin Penelitian**

Yth,
Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu (DPMPTSP) Provinsi Bengkulu
di
Tempat

Sehubungan penyusunan tugas akhir mahasiswa dalam bentuk Skripsi Progam Studi Keperawatan Program Sarjana Terapan Jurusan Keperawatan Politeknik Kesehatan Kemenkes Bengkulu Tahun Akademik 2025/2026 , dengan ini kami mohon Bapak/Ibu dapat memberikan izin pengambilan data untuk penelitian kepada:

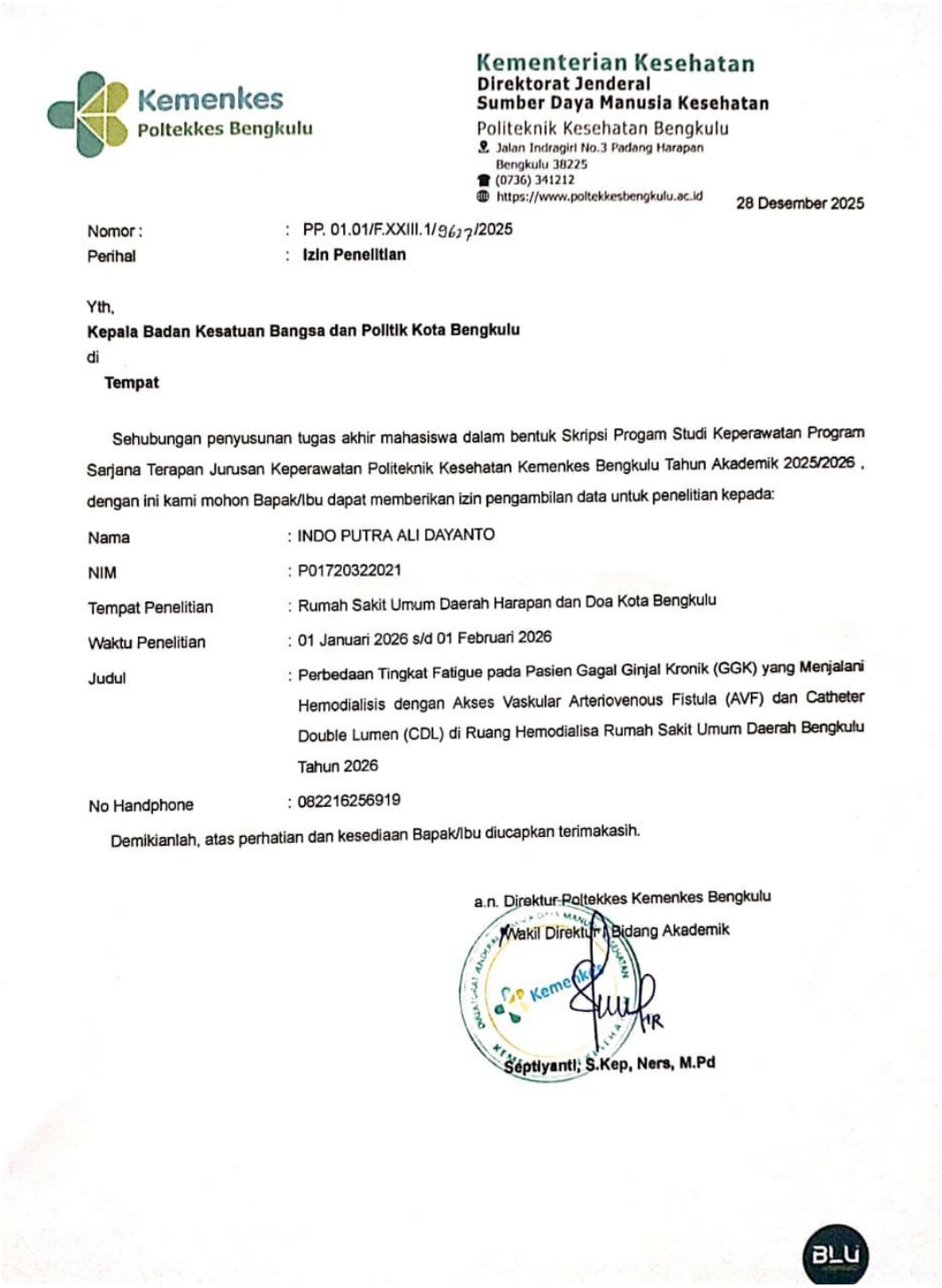
Nama	: INDO PUTRA ALI DAYANTO
NIM	: P01720322021
Tempat Penelitian	: Rumah Sakit Umum Daerah dr. M. Yunus Provinsi Bengkulu
Waktu Penelitian	: 01 s.d. 28 Februari 2026
Judul	: Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu Tahun 2026
No Handphone	: 082216256919

Demikianlah, atas perhatian dan kesediaan Bapak/Ibu diucapkan terimakasih.

a.n. Direktur Poltekkes Kemenkes Bengkulu
Wakil Direktur I, Bidang Akademik

Septiyanti, S.Kep, Ners, M.Pd

Appendix 21 Research Permit Introduction Letter to the Bengkulu City National Unity and Political Affairs Agency (KESBANGPOL)



Kementerian Kesehatan
Direktorat Jenderal
Sumber Daya Manusia Kesehatan
Politeknik Kesehatan Bengkulu
Jalan Indragiri No.3 Padang Harapan
Bengkulu 38225
(0736) 341212
https://www.poltekkesbengkulu.ac.id

28 Desember 2025

Nomor : PP. 01.01/F.XXIII.1/9617/2025
Perihal : **Izin Penelitian**

Yth,
Kepala Badan Kesatuan Bangsa dan Politik Kota Bengkulu
di
Tempat

Sehubungan penyusunan tugas akhir mahasiswa dalam bentuk Skripsi Progam Studi Keperawatan Program Sarjana Terapan Jurusan Keperawatan Politeknik Kesehatan Kemenkes Bengkulu Tahun Akademik 2025/2026 , dengan ini kami mohon Bapak/Ibu dapat memberikan izin pengambilan data untuk penelitian kepada:

Nama	: INDO PUTRA ALI DAYANTO
NIM	: P01720322021
Tempat Penelitian	: Rumah Sakit Umum Daerah Harapan dan Doa Kota Bengkulu
Waktu Penelitian	: 01 Januari 2026 s/d 01 Februari 2026
Judul	: Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu Tahun 2026
No Handphone	: 082216256919

Demikianlah, atas perhatian dan kesediaan Bapak/Ibu diucapkan terimakasih.

a.n. Direktur Poltekkes Kemenkes Bengkulu
Wakil Direktur I Bidang Akademik

Septiyanti, S.Kep, Ners, M.Pd

Appendix 22 Research Recommendation Letter Issued by the Bengkulu Provincial Investment and One-Stop Integrated Services Office (DPMPTSP)

PEMERINTAH PROVINSI BENGKULU
DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU
Jalan Batang Hari No.108, Kelurahan Tanah Patah, Kecamatan Ratu Agung, Kota Bengkulu
Website: https://dpmptsp.bengkuluprov.go.id I Email: dpmptsp@bengkuluprov.go.id
BENGKULU 38224

REKOMENDASI
Nomor : 503/82.650/106/DPMPTSP-P.4/2026

TENTANG PENELITIAN

Dasar :
1. Peraturan Gubernur Bengkulu Nomor 13 Tahun 2022 Tentang Pendelegasian Wewenang Penyelenggaraan Pelayanan Perizinan Berusaha Berbasis Resiko dan Non perizinan Kepada Kepala Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu.
2. Surat Wakil Direktur I Bidang Akademik Poltekkes Kemenkes Bengkulu Nomor : PP.01.01/F.XXII.1/365/2026, Tanggal 22 Januari 2026 Perihal Rekomendasi Penelitian. Permohonan diterima tanggal 28 Januari 2026 .

Nama / NPM	:	INDO PUTRA ALI DAYANTO/P01720322021
Pekerjaan	:	Mahasiswa
Maksud	:	Melakukan Penelitian
Judul Proposal Penelitian	:	Perbedaan Tingkat Fatigue Pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis Dengan Akses Vaskuler Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu
Daerah Penelitian	:	Rumah Sakit Umum Daerah Dr. M. Yunus Bengkulu
Waktu Penelitian/Kegiatan	:	01 Februari 2026 s.d 28 Februari 2026
Penanggung Jawab	:	Wakil Direktur I Bidang Akademik Poltekkes Kemenkes Bengkulu

Dengan ini merekomendasikan penelitian yang akan diadakan dengan ketentuan :

a. Sebelum melakukan penelitian harus melapor kepada Gubernur/Bupati/Walikota Cq.Kepala Badan Kesatuan Bangsa dan Politik atau sebutan lain setempat.
b. Harus mentaati semua ketentuan Perundang-undangan yang berlaku.
c. Selesai melakukan penelitian agar melaporkan/menyampaikan hasil penelitian kepada Kepala Badan Kesatuan Bangsa dan Politik Provinsi Bengkulu.
d. Apabila masa berlaku Rekomendasi ini sudah berakhir, sedangkan pelaksanaan penelitian belum selesai, perpanjangan Rekomendasi Penelitian harus diajukan kembali kepada instansi pemohon.
e. Rekomendasi ini akan dicabut kembali dan dinyatakan tidak berlaku, apabila ternyata pemegang surat rekomendasi ini tidak mentaati/mengindahkan ketentuan-ketentuan seperti tersebut di atas.

Demikian Rekomendasi ini dikeluarkan untuk dapat dipergunakan sebagaimana mestinya

Ditetapkan di : Bengkulu
Pada tanggal : 28 Januari 2026

Plt. KEPALA DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU PROVINSI BENGKULU

YULIZON HIKMA PUTRA, SE., M.M
Pembina / IV.a
NIP. 19750714 199403 1 003

Tembusan disampaikan kepada Yth :
1. Kepala Badan Kesatuan Bangsa dan Politik Provinsi Bengkulu
2. Direktur Bidang Akademik Poltekkes Kemenkes Bengkulu
3. Wakil Direktur I Bidang Akademik Poltekkes Kemenkes Bengkulu
4. Yang Bersangkutan

Appendix 23 Research Recommendation Letter Issued by the Bengkulu City National Unity and Political Affairs Agency (KESBANGPOL)

PEMERINTAH KOTA BENGKULU

BADAN KESATUAN BANGSA DAN POLITIK

Alamat : Jl. Melur No.1 Kelurahan Nusa Indah
Email : bkesbangpolkotabengkulu@gmail.com

REKOMENDASI PENELITIAN

Nomor : 000.9.2/2190/KESBANGPOL-REK/2025

Dasar : Peraturan Menteri Dalam Negeri Republik Indonesia Nomor 7 Tahun 2014 tentang Perubahan Atas Peraturan Menteri Dalam Negeri Republik Indonesia Nomor 64 Tahun 2011 tentang Pedoman Penerbitan Rekomendasi Penelitian

Memperhatikan : Surat dari Wakil Direktur I Bidang Akademik Poltekkes Kemenkes Bengkulu Nomor : PP.01.01/F.XXIII.1/9627/2025 Tanggal 28 Desember 2025 perihal Izin Penelitian

DENGAN INI MENYATAKAN BAHWA

Nama	:	INDO PUTRA ALI DAYANTO
NIM	:	P01720322021
Pekerjaan	:	Mahasiswa/i
Prodi/ Fakultas	:	Sarjana Terapan Keperawatan
Judul Penelitian	:	Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu Tahun 2026
Tempat Penelitian	:	Rumah Sakit Umum Daerah Harapan dan Doa Kota Bengkulu
Waktu Penelitian	:	30 Desember 2025 s.d 01 Februari 2026
Penanggung Jawab	:	Wakil Direktur I Bidang Akademik Poltekkes Kemenkes Bengkulu

Dengan Ketentuan :

1. Tidak dibenarkan mengadakan kegiatan yang tidak sesuai dengan penelitian yang dimaksud.
2. Harus mentaati peraturan perundang-undangan yang berlaku serta mengindahkan adat istiadat setempat.
3. Apabila masa berlaku Rekomendasi Penelitian ini sudah berakhir, sedangkan pelaksanaan belum selesai maka yang bersangkutan harus mengajukan surat perpanjangan Rekomendasi Penelitian.
4. Surat Rekomendasi Penelitian ini akan dicabut kembali dan dinyatakan tidak berlaku apabila ternyata pemegang surat ini tidak mentaati ketentuan seperti tersebut diatas.

Demikianlah Rekomendasi Penelitian ini dikeluarkan untuk dapat dipergunakan sebagaimana mestinya.

Bengkulu, 30 Desember 2025

a.n. WALI KOTA BENGKULU
Kepala Badan Kesatuan Bangsa dan Politik Kota Bengkulu,

Syofyan Tosoni, SE, MM
Pembina Utama Muda (IVc)
NIP. 197009021993031006

Dokumen ini telah ditandatangani secara elektronik menggunakan sertifikat elektronik yang diterbitkan oleh Balai Besar Sertifikasi Elektronik (BSrE), Badan Siber dan Sandi Negara (BSSN).

Appendix 24 Research Permit Issued by Dr. M. Yunus Regional General Hospital, Bengkulu Province

PEMERINTAH PROVINSI BENGKULU
DINAS KESEHATAN
UPTD KHUSUS RSUD dr. M. YUNUS
Jl. Bhayangkara Bengkulu 38229 Telp. (0736) 52004 – 52006 Fax (0736) 52007

Bengkulu, 05 Februari 2026

Nomor : 074/ ٢٥ /BID-DIK/II/2026
Lampiran : -
Perihal : Permohonan Izin Penelitian

Yth. Kabid. Pelayanan Keperawatan
di-
Bengkulu

Menindaklanjuti surat dari Poltekkes Kemenkes Bengkulu Nomor : PP.06.02/F.XXIII.1/364/2026, Perihal Izin Penelitian :

Nama	:	**INDO PUTRA ALI DAYANTO**
NIM	:	P01720322021
Prodi	:	DIV Keperawatan
Judul Penelitian	:	Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Cathere Double Lumen (CDL) di Ruang Hemodialisa RSUD dr. M. Yunus Bengkulu Tahun 2026
Ruangan	:	Hemodialisa

Bersama ini kami mohon kesediaan unit bersangkutan untuk memberikan izin terhitung mulai 05 Februari s.d 05 Maret 2026. Setelah melakukan penelitian yang bersangkutan wajib melaporkan kembali hasil penelitian ke Bidang Pendidikan.

Demikian kami sampaikan, atas perhatian dan kerjasamanya diucapkan terima kasih.

KEPALA BIDANG PENDIDIKAN

ATMAN GUSMADI, SKM
NIP. 19730809 199303 1 003

Bengkulu, 06/02/2026
Bidang Pelayanan Keperawatan
Kasi Rawat Jalan Dan Khusus

LOPI FERNANDES, SKM,MM
NIP. 197[illegible]015 199602 1 004

Acc Silahkan Penelitian
di Lab RSMY Bengkulu

Appendix 25 Research Permit Issued by Harapan dan Doa Regional General Hospital, Bengkulu City

PEMERINTAH KOTA BENGKULU
RUMAH SAKIT UMUM DAERAH HARAPAN DAN DOA
Jl. Letjend. Basuki Rahmat No.01| Bengkulu 38223
(0736) 34 5100|Fax (0736) 345 100 |kotabengkulursud@gmail.com

SURAT IZIN PENELITIAN

Nomor : 000.9.2/354/RSUD-HD_SI/2025

Dasar :
a. Surat Permohonan Izin Penelitian dari Mahasiswa Prodi Sarjana Terapan Keperawatan Jurusan Keperawatan Poltekkes Kemenkes Bengkulu Tahun Akademik 2025/2026 Nomor: PP.01.01/F.XXIII.1/9626/2025 tanggal 28 Desember 2025
b. Surat Rekomendasi Penelitian Dari Kesbangpol Nomor : 000.9.2/2190/KESBANGPOL-REK/2025 Tanggal 30 Desember 2025
c. Surat Izin Pra Penelitian dari RSUD Harapan dan Doa Kota Bengkulu Nomor : 000.9.2/254/RSUD-HD_SI/2025 Tanggal 12 Agustus 2025
d. Uji Etik dari Komite Etik Penelitian Poltekkes Kemenkes Bengkulu No.KEPK.BKL/791/12/2025 Tanggal 26 Desember 2025

DENGAN INI MEMBERIKAN IZIN KEPADA

Nama	:	Indo Putra Ali Dayanto
NPM	:	P01720322021
Program Studi	:	D IV Keperawatan
Ruangan Penelitian	:	Hemodialisa
Judul Penelitian	:	Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu Tahun 2026
Waktu Penelitian	:	**31 Desember 2025 s/d 31 Januari 2026**
Dengan Ketentuan	:	1. Tidak Boleh Mengakses Rekam Medis Pasien Dan Menyebar Luaskan Data Pasien 2. Tidak diperkenankan mengambil Gambar Foto/Video/Audio di area pelayanan rumah sakit sesuai undang – undang Praktik Kedokteran No.29/2004, Pasal 48 dan 51 dan Undang – undang Telekomunikasi No. 36/1999, Pasal 40. 3. Tidak diperkenankan memeriksakan sampel Darah, Dahak, dan Feses di laboraturium RSUD Harapan dan Doa Kota Bengkulu 4. Harus mentaati peraturan Perundang – undangan yang berlaku serta mengindahkan adat istiadat setempat. 5. Tidak memaksa, dan menggangu jam kerja atau jam pelayanan Karyawan di RSUD Harapan dan Doa Kota Bengkulu 6. Apabila masa berlaku Izin Penelitian ini sudah berakhir, sedangkan pelaksanaan belum selesai maka yang bersangkutan harus mengajukan surat perpanjangan Izin Penelitian ke Bagian Diklat RSUD Harapan dan Doa Kota Bengkulu membawa surat izin dari kampus dan surat izin penelitian dari RSUD Harapan dan Doa Kota Bengkulu. 7. Surat Izin Penelitian ini akan dicabut kembali dan dinyatakan tidak berlaku apabila ternyata pemegang surat ini tidak mentaati ketentuan dari RSUD Harapan dan Doa Kota Bengkulu.

Demikianlah Surat Izin Penelitian ini dikeluarkan, untuk dipergunakan sebagaimana mestinya.

Bengkulu, 31 Desember 2025
Direktur UPTD Rumah Sakit Umum Daerah Harapan dan Doa Kota Bengkulu,

dr. Lista Cerlyviera. MM
Pembina TK. I (IV/b)
NIP. 196907041999032003

Dokumen ini telah ditandatangani secara elektronik menggunakan sertifikat elektronik yang diterbitkan oleh Balai Besar Sertifikasi Elektronik (BSrE), Badan Siber dan Sandi Negara (BSSN).

Appendix 26 Certificate of Research Completion Issued by Dr. M. Yunus Regional General Hospital, Bengkulu Province

PEMERINTAH PROVINSI BENGKULU
DINAS KESEHATAN
UPTD RSUD dr. M. YUNUS
Jl. Bhayangkara Bengkulu 38229 Telp. (0736) 52004 – 52006 Fax. (0736) 52007
BENGKULU 38229

SURAT KETERANGAN
Nomor : 074/ 119 /BID-DIK/III/2026

Yang bertandatangan dibawah ini :

a. Nama : **LENI MARLINA, S.SI, APT, M.Si**
b. Jabatan : Wakil Direktur Penunjang Medik dan Kependidikan

dengan ini menerangkan bahwa :

a. Nama : **INDO PUTRA ALI DAYANTO**
b. NIM : P01720322021
c. Prodi : DIV Keperawatan
d. Institusi : Poltekkes Kemenkes Bengkulu
e. Judul Penelitian : Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Cathere Double Lumen (CDL) di Ruang Hemodialisa RSUD dr. M. Yunus Bengkulu Tahun 2026.
f. Ruang Penelitian : Hemodialisa.
g. Maksud : Telah Selesai Melaksanakan Penelitian Dari Tanggal 05 Februari s.d 05 Maret 2026

Demikian Surat Keterangan ini dibuat untuk dipergunakan seperlunya.

Bengkulu, 09 Maret 2026
Wakil Direktur Penunjang Medik & Kependidikan

LENI MARLINA, S.SI, APT, M.Si
NIP. 19750808 200312 2 007

Appendix 27 Certificate of Research Completion Issued by Harapan dan Doa Regional General Hospital, Bengkulu City

PEMERINTAH KOTA BENGKULU
RUMAH SAKIT UMUM DAERAH HARAPAN DAN DOA
Jl. Letjend. Basuki Rahmat No.01| Bengkulu 38223
(0736) 34 5100|Fax (0736) 345 100 |kotabengkulursud@gmail.com

SURAT KETERANGAN SELESAI PENELITIAN

Nomor : 000.9.2/15/RSUD-HD/SKET/2026

Saya yang bertanda tangan di bawah ini :

Nama	: dr. Lista Cerlyviera, M.M
NIP	: 19690704 199903 2 003
Pangkat/ Gol	: Pembina Tk.I IV/b
Jabatan	: Direktur Rumah Sakit Umum Daerah Harapan dan Doa Kota Bengkulu

Dengan ini menerangkan bahwa :

Nama	:	Indo Putra Ali Dayanto
NPM	:	P01720322021
Program Studi	:	D IV Keperawatan
Ruangan Penelitian	:	Hemodialisa
Tanggal Penelitian	:	**31 Desember 2025 s/d 31 Januari 2026**

Telah selesai melakukan penelitian dengan judul **"Perbedaan Tingkat Fatigue pada Pasien Gagal Ginjal Kronik (GGK) yang Menjalani Hemodialisis dengan Akses Vaskular Arteriovenous Fistula (AVF) dan Catheter Double Lumen (CDL) di Ruang Hemodialisa Rumah Sakit Umum Daerah Bengkulu Tahun 2026"**

Demikianlah surat ini dikeluarkan, untuk dipergunakan sebagaimana mestinya.

Bengkulu, 09 Februari 2026
Direktur UPTD Rumah Sakit Umum Daerah Harapan dan Doa Kota Bengkulu,

dr. Lista Cerlyviera. MM
Pembina TK. I (IV/b)
NIP. 196907041999032003

Appendix 28 Similarity Check Report

PERBEDAAN TINGKAT FATIGUE PADA PASIEN GAGAL GINJAL KRONIK (GGK) YANG MENJALANI HEMODIALISIS DENGAN AKSES VASKULAR ARTERIOVENOUS FISTULA (AVF) DAN CATHETER DOUBLE LUMEN (CDL) DI RUANG HEMODIALISA RUMAH SAKIT UMUM DAERAH BENGKULU TAHUN 2026

By Indo Putra Ali Dayanto

20/4/2026
Petugas Perpustakaan
Amrilan Rahman

WORD COUNT	22230	TIME SUBMITTED	13-APR-2026 11:47AM
		PAPER ID	121129406

PERBEDAAN TINGKAT FATIGUE PADA PASIEN GAGAL GINJAL KRONIK (GGK) YANG MENJALANI HEMODIALISIS DENGAN AKSES VASKULAR ARTERIOVENOUS FISTULA (AVF) DAN CATHETER DOUBLE LUMEN (CDL) DI RUANG HEMODIALISA RUMAH SAKIT UMUM DAERAH BENGKULU TAHUN 2026

ORIGINALITY REPORT

21% SIMILARITY INDEX

Appendix 29 Research Title Approval Form

TITLE APPROVAL PAGE
THESIS OF STUDENTS THE BACHELOR OF APPLIED NURSING STUDY PROGRAM BENGKULU HEALTH POLYTECHNIC MINISTRY OF HEALTH OF THE REPUBLIC OF INDONESIA

Name	:	Indo Putra Ali Dayanto
Place, Date of Birth	:	Lubuklinggau, 01 August 2004
Student ID	:	P01720322021
Title of Thesis Submitted	:	Comparison of Fatigue Levels Among Chronic Kidney Disease Patients Undergoing Hemodialysis Via Arteriovenous Fistula (AVF) and Catheter Double Lumen (CDL) Vascular Access at the Hemodialysis Unit of Bengkulu Regional General Hospital 2026
Approved On Date	:	

Bengkulu, July 30, 2025

Supervisor I	**Supervisor II**
(Ns. Hendri Heriyanto, S.Kep., M.Kep)	**(Ns. Dwi Wulandari, S.Kep, M.A.N)**
NIP. 198205152002121004	**NIP. 198903162025212064**

Acknowledge by:
Head of the Bachelor of Applied Nursing Study Program Bengkulu Health Polytechnic Ministry of Health of The Republic of Indonesia

(Ns. Hendri Heriyanto, S.Kep., M.Kep)
NIP. 198205152002121004

Appendix 30 Undergraduate Thesis Supervision Record

SUPERVISION BOOK

THESIS
LEVEL IV STUDENTS
NURSING BACHELOR OF APPLIED NURSING
STUDY PROGRAM

NAME : Indo Putra Ali Dayanto

STUDENT ID : P01720322021

MINISTRY OF HEALTH OF THE REPUBLIC OF INDONESIA
BENGKULU HEALTH POLYTECHNIC MINISTRY OF HEALTH DEPARTMENT OF NURSING BACHELOR OF APPLIED NURSING STUDY PROGRAM
ACADEMIC YEAR 2025/2026

THESIS GUIDANCE CONSUL SHEET
(SUPERVISOR 1)

Name	:	Indo Putra Ali Dayanto
Student ID	:	P01720322021
Study Program	:	Bachelor of Applied Nursing
Supervisor 1	:	Ns. Hendri Heriyanto, S.Kep., M.Kep
NIP	:	198205152002121004
Title of Thesis	:	Comparison of Fatigue Levels Among Chronic Kidney Disease Patients Undergoing Hemodialysis Via Arteriovenous Fistula (AVF) and Catheter Double Lumen (CDL) Vascular Access at the Hemodialysis Unit of Bengkulu Regional General Hospital 2026

Yes	Day/Date	Topics	Supervisor's Input	Signature
1	July 30, 2025	Thesis research proposal title consultation	- Approved titles thesis research proposals on Differences in Fatigue Levels in Chronic Kidney Failure (CKD) Patients Undergoing Hemodialysis with Arteriovenous Fistula (AVF) and Double Lumen Catheter (CDL) Access in the Hemodialysis Room of the Bengkulu Regional General Hospital in 2026 - Increase *literature* and read journals related to the title of the minimum research journal sinta 3 or sqopus indexed journal - Continue to start creating CHAPTERS 1-3	

2	August 26, 2025	Consultation of proposals CHAPTER 1-CHAPTER 3	- Improve data and data systematics in CHAPTER I - Fix Problem Formulation - Research objectives add dominant factors - CHAPTER II Add material on factors related to fatigue levels to vascular access AVF and CDL - CHAPTER III improve the coding of variable measurement results - Continue to CHAPTER IV, Add Alternative analysis and normality test for bivariate tests - Improve the writing of terms/languages	
3	September 2, 2025	Proposal consultation CHAPTER 1 - CHAPTER 4	- Source: Guideline - Chart list and others such as table of contents - Dapus according to the guide - Add supporting journals and research results - Fix Operational Definition - Input in *Mendley* all bibliographies - Start creating questionnaire attachments to be used in the research - CHAPTER IV refine the hypothesis statistical test to be used and look for	

			references to sample formulas that are directly specific to the study	
4	September 15, 2025	Consultation on proposal improvements CHAPTER 1-CHAPTER 4	- Improve writing and margins - Bibliography all in *Mendley* right? - Detached attachments - Not given a page on attachment	
5	September 29, 2025	Consultation on the improvement of the CHAPTER 1-CHAPTER 4 proposal and appendices	- Revision according to supervisor's suggestion 1 - Customize the research format - Informed consent sheet - Research formula - Complete the consul sheet	
6	October 20, 2025	Consultation on the completeness of the attachment of research instruments	- Research instruments add sources - Pay attention again to the format of the research instrument according to what data you want to take in the research - Make sure again that the research instruments used have been tested for reliability and validity	
7	October 29, 2025	Recheck CHAPTER 1 – CHAPTER 4 and complete the thesis research proposal	- Continue to make a Powerpoint for the thesis proposal seminar exam	

			- Approved thesis proposal seminar exam	
8	March 3, 2026	Consultation on SPSS data processing results	- Consultation on SPSS data processing results and questionnaire master data - Preparation of data processing according to specific objectives and operational definitions - Make sure the data entered is correct and double-check if there are any data errors - Continue to write CHAPTER 5	
9	March 9, 2026	Consultation CHAPTER 5 Research results	- The content of CHAPTER 5 adapts to the Special Purpose - The table and interpretation of the results of univariate analysis research were changed to one group only - Improved table presentation - Improved reading of table interpretation results - The results of the data normality and equality analysis are shown in chapter 5	
10	March 11, 2026	Consultation on the revision of CHAPTER 5	- Pay attention to the typo of writing in the table contents and interpretations, both univariate and bivariate analysis results	

			- The data that is interpreted is only the most dominant data	
11	02 April 2026	Revision Consultation CHAPTER 1 – CHAPTER 5	- Changing data for research results - Continue to write CHAPTER 6, discussing the results with relevant journals and previous research theories that are almost in line with the results of the research in CHAPTER 5	
12	07 April 2026	Consultation CHAPTER 6 Discussion, discussion of research results, and limitations of research	- Check the typo writing in the discussion sentence and discussion of the results - The limitations of research should not be too much - Write research limitations according to field conditions - Continue to write CHAPTER 6 and CHAPTER 7	
13	09 April 2026	Chapter 6 revision consultation and Chapter 7 consultation Conclusions and suggestions	- Add Multiple relevant journals and make sure the journal has a DOI - Contents Conclusions and suggestions tailored to specific research objectives and benefits - Display the most dominant data at the conclusion and check the suitability of the data	

14	April 10, 2026	Recheck CHAPTER 1 – CHAPTER 7 and complete the thesis to continue the seminar session	- Approved exam seminar results - Prepare Powerpoint for the thesis seminar exam - Make sure your thesis turnitin is below 25% according to the thesis guidelines - Compile journal manuscripts to publish research after seminar results	

THESIS GUIDANCE CONSUL SHEET
(SUPERVISOR 2)

Name	:	Indo Putra Ali Dayanto
Student ID	:	P01720322021
Study Program	:	Bachelor of Applied Nursing
Supervisor 2	:	Ns. Dwi Wulandari, S.Kep., M.A.N
NIP	:	198903162025212064
Title of Thesis	:	Comparison of Fatigue Levels Among Chronic Kidney Disease Patients Undergoing Hemodialysis Via Arteriovenous Fistula (AVF) and Catheter Double Lumen (CDL) Vascular Access at the Hemodialysis Unit of Bengkulu Regional General Hospital 2026

Yes	Day/Date	Topics	Supervisor's Input	Signature
1	July 30, 2025	Thesis research proposal title consultation	- Approved titles thesis research proposals on Differences in Fatigue Levels in Chronic Kidney Failure (CKD) Patients Undergoing Hemodialysis with Arteriovenous Fistula (AVF) and Double Lumen Catheter (CDL) Access in the Hemodialysis Room of the Bengkulu Regional General Hospital in 2026 - Increase *literature* and read journals related to the title of the minimum research journal sinta 3 or sqopus indexed journal - Continue to start creating CHAPTERS 1-3	

2	August 29, 2025	Consultation of proposals CHAPTER 1-CHAPTER 3	- Improve data and data systematics in CHAPTER I - Fix Problem Formulation - Research objectives add dominant factors - CHAPTER II Add material on factors related to fatigue levels to vascular access AVF and CDL - CHAPTER III improve the coding of variable measurement results - Continue to CHAPTER IV, Add Alternative analysis and normality test for bivariate tests - Improve the writing of terms/languages	
3	September 8, 2025	Proposal consultation CHAPTER 1 - CHAPTER 4	- Source: Guideline - Chart list and others such as table of contents - Dapus according to the guide - Add supporting journals and research results - Fix Operational Definition - Input in *Mendley* all bibliographies - Start creating questionnaire attachments to be used in the research - CHAPTER IV refine the hypothesis statistical test to be used and look for	

			references to sample formulas that are directly specific to the study	
4	September 24, 2025	Consultation on proposal improvements CHAPTER 1-CHAPTER 4	- Improve writing and margins - Bibliography all in *Mendley* right? - Detached attachments - Not given a page on attachment	
5	October 23, 2025	Consultation on the improvement of the CHAPTER 1-CHAPTER 4 proposal and appendices	- Revision according to supervisor's suggestion 2 - Customize the research format - Informed consent *sheet* - Research formula - Complete the consul sheet	
6	October 31, 2025	Consultation on the completeness of the attachment of research instruments	- Research instruments add sources - Pay attention again to the format of the research instrument according to what data you want to take in the research - Make sure again that the research instruments used have been tested for reliability and validity	
7	04 November 2025	Recheck CHAPTER 1 – CHAPTER 4 and complete the thesis research proposal	- Continue to make a Powerpoint for the thesis proposal seminar exam - Approved thesis proposal seminar exam	

8	04 March 2026	Consultation on SPSS data processing results	- Consultation on SPSS data processing results and questionnaire master data - Preparation of data processing according to specific objectives and operational definitions - Make sure the data entered is correct and double-check if there are any data errors - Continue to write CHAPTER 5	
9	March 10, 2026	Consultation CHAPTER 5 Research results	- The content of CHAPTER 5 adapts to the Special Purpose - The table and interpretation of the results of univariate analysis research were changed to one group only - Improved table presentation - Improved reading of table interpretation results - The results of the data normality and equality analysis are shown in chapter 5	
10	March 12, 2026	Consultation on the revision of CHAPTER 5	- Pay attention to the typo of writing in the table contents and interpretations, both univariate and bivariate analysis results - The data that is interpreted is only the most dominant data	

11	March 13, 2026	Revision Consultation CHAPTER 1 – CHAPTER 5	- Changing data for research results - Continue to write CHAPTER 6, discussing the results with relevant journals and previous research theories that are almost in line with the results of the research in CHAPTER 5	
12	01 April 2026	Consultation CHAPTER 6 Discussion, discussion of research results, and limitations of research	- Check the typo writing in the discussion sentence and discussion of the results - The limitations of research should not be too much - Write research limitations according to field conditions - Continue to write CHAPTER 6 and CHAPTER 7	
13	02 April 2026	Chapter 6 revision consultation and Chapter 7 consultation Conclusions and suggestions	- Add Multiple relevant journals and make sure the journal has a DOI - Contents Conclusions and suggestions tailored to specific research objectives and benefits - Display the most dominant data at the conclusion and check the suitability of the data	
14	April 10, 2026	Recheck CHAPTER 1 – CHAPTER 7 and complete the thesis to	- Approved exam seminar results - Prepare Powerpoint for the thesis seminar exam	

		continue the seminar session	- Make sure your thesis turnitin is below 25% according to the thesis guidelines - Compile journal manuscripts to publish research after seminar results	