

## RESEARCH PROTOCOL

### Research Explanation Sheet (Intervention Group)

Dear Prospective Respondent,

On-Site

Respectfully, I am the undersigned:

Name: Chairul Huda

Phone Number: 085360037600

A student of the Master of Nursing Program specializing in Medical-Surgical Nursing, Faculty of Nursing, University of Indonesia, intends to conduct research on "The Effect of *Breathing Exercise, Balloon Blowing Technique*, and Deep Breathing on Increasing Peripheral Oxygen Saturation in COPD Patients." This study aims to identify the effect of *giving the breathing exercise, balloon-blowing technique, and deep breathing* on increasing peripheral oxygen saturation in COPD patients.

#### A. Benefits

This research for patients is expected to be able to overcome *the oxygen saturation deficit* so that it can increase oxygen saturation. For the research community, it is able to make the results of this study one of the evidence-based nursing practices for their research and add insight into breathing exercises for the general public.

#### B. Patients' Rights and Justice

You are free to choose to participate in this study without any coercion. If you have decided to participate, you are also free to resign/change your mind at any time without being subject to any fines or sanctions. If you are not willing to participate in this study, you will still get the appropriate action. The intervention and control groups both get the right action, and the control group, after the research is completed, will also be taught the *Breathing Exercise Balloon-Blowing Technique*.

#### C. Confidentiality

The researcher guarantees the confidentiality of all the information you provide. The confidentiality guarantee in question is such that it does not include names, but uses codes, and will not display facial photos or other confidential data when reporting or publishing research results. You as a respondent have the right to request to quit the research process

that has been running for any reason or can resign at any time if you feel discomfort during the research process.

#### D. Possible Risks and Anticipatory Steps

The researcher assumes that this research is not dangerous and does not cause a negative impact on you. So the researcher believes that this research will not have a detrimental impact on you. Respondents may be exhausted after blowing the balloon but this is unlikely to happen because the patient has been measured oxygen saturation, condition monitoring. If at the time of giving the intervention, the patient is unable to intervene, he will be rested for 1 hour, 1 day, and if it is severe, it will be eliminated. The anticipatory step to neutralize the effects of the treatment is to stop blowing the balloon and rest.

#### E. Balloon Blowing training procedure

1. You will get an explanation of the procedure
2. You will be measured the Oxygen Saturation in your fingers
3. You will be positioned seated or half-seated
4. You will be asked to do 1 cycle of "deep breath exercises" consisting of: deep breathing for 3-4 seconds, holding for 2-3 seconds then exhaling.
5. You will then be asked to blow the balloon slowly for 5-8 seconds. Stop for 3 seconds with your tongue on your roof to prevent airflow from escaping the balloon. Do up to 4 puffs in one cycle without pinching the neck of the balloon and keep the tongue on the roof of the mouth, then inhale again through the nose, after the fourth breath, pinch the neck of the balloon and remove it from your mouth and let the air out of the balloon. This is considered 1 cycle of balloon blowing exercises.
6. Each training session is carried out 3 cycles of balloon blowing exercises. You will be asked to take a 1-minute break between each cycle.
7. You will be asked to rest for 1 minute after completing 3 cycles
8. You will have your oxygen saturation measured after doing this procedure on the first, third and seventh days.
9. You will perform a deep breathing and balloon blowing procedure (steps 1 to 7) every morning and evening for 7 days which will take 10-15 minutes.

#### F. Privacy

The researcher will maintain privacy; all information related to the identity of the research subject will be kept confidential and will only be known by the researcher and research staff. The results of the research will be published without the identity of the research subject.

The comfort of you during the research will be created by creating a conducive environment, and you will be arranged in the most comfortable position possible during the intervention and data collection.

If you agree, then I ask you to be able to sign the agreement that has been prepared. However, if you are not willing to be a respondent, there is no threat of sanctions or a decrease in the quality of nursing services that will be provided.

Thank you for your attention and cooperation.

Banda Aceh, March 10, 2026

Researcher

A handwritten signature in black ink, appearing to read 'C. Huda', with a stylized flourish at the end.

Chairul Huda

## Research Explanatory Sheet (Control Group)

Dear Prospective Respondent,

On-Site

Respectfully, I am the undersigned:

Name: Chairul Huda

NPM: 2006562055

Phone Number: 085360037600

A student of the Master of Nursing Program specializing in Medical Surgical Nursing, Faculty of Nursing, University of Indonesia, intends to conduct research on "The Effect of *Breathing Exercise Balloon-Blowing* Technique and Deep Breathing on Increasing Peripheral Oxygen Saturation in COPD Patients." This study aims to identify the effect of giving breathing exercises, balloon blowing, *and deep breathing techniques* on increasing peripheral oxygen saturation in COPD patients.

### A. Benefits

This research for patients is expected to be able to overcome *the oxygen saturation deficit* so that it can increase oxygen saturation; for the research community, it is able to make the results of this study one of the evidence-based nursing practices for their research and be able to add insight into breathing exercises for the general public.

### B. Patients' Rights and Justice

You are free to choose to participate in this study without any coercion. If you have decided to participate, you are also free to resign/change your mind at any time without being subject to any fines or sanctions. If you are not willing to participate in this study, you will still get the appropriate action. The intervention and control groups both get the right action, and the control group, after the research is completed, will also be taught the *Breathing Exercise Balloon Blowing Technique*.

### C. Confidentiality

The researcher will guarantee the confidentiality of all the information you provide. The confidentiality guarantee in question is such as not including names but using codes and will not display facial photos or other confidential data when reporting or publishing research results. You as a respondent have the right to request to quit the research process

that has been running for any reason or can resign at any time if you feel discomfort during the research process.

#### D. Possible Risks and Anticipatory Steps

The researcher assumes that this research is not dangerous and does not cause a negative impact on you. So the researcher believes that this research will not have a detrimental impact on you. Respondents may be exhausted after blowing the balloon but this is unlikely to happen because the patient has been measured oxygen saturation, condition monitoring. If at the time of giving the intervention, the patient is unable to intervene, he will be rested for 1 hour, 1 day and if he is heavy, he will be eliminated. The anticipatory step to neutralize the effects of the treatment is to stop blowing the balloon and rest.

#### E. Deep breathing training procedures

1. You will get an explanation of the procedure
2. You will be measured the Oxygen Saturation in your fingers
3. You will be positioned seated or half-seated
4. You will be asked to do 1 cycle of "deep breath exercises" consisting of: deep breathing for 3-4 seconds, holding for 2-3 seconds then exhaling.
5. You will be asked to do the breath exercise in 3 cycles and rest for 1 minute between each cycle.
6. You will be asked to rest for 1 minute after completing 3 cycles
7. You will have your oxygen saturation measured after doing this procedure on the first, third and seventh days.
8. You will perform a deep breathing procedure (steps 1 to 7) every morning and evening for 7 days which will take 8-10 minutes.

#### F. Privacy

The researcher will maintain privacy, all information related to the identity of the research subject will be kept confidential and will only be known by the researcher, research staff. The results of the research will be published without the identity of the research subject. The comfort of you during the research will be created by creating a conducive environment, and you will be arranged in the most comfortable position possible during the intervention and data collection.

If you agree, then I ask you to be able to sign the agreement that has been prepared. However, if you are not willing to be a respondent, there is no threat of sanctions or a decrease in the quality of nursing services that will be provided.

Thank you for your attention and cooperation.

Banda Aceh, March 10, 2026

Researcher

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Chairul Huda

