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## **A study to assess the effectiveness of structured teaching programme on knowledge regarding pulmonary edema among staff nurses working at selected hospitals, Gonda**

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### **Abstract**

Pulmonary oedema is a common condition in elderly people but very uncommon in young people. About 1 in 15 people aged 75-84 and just over 1 in 7 people aged 85 years and above have heart failure. Pulmonary edema increasingly is being recognized as a perioperative complication affecting outcome. Several factors have been identified (eg, fluid overload, systemic inflammatory response to surgery, myocardial ischemia, blood product transfusion), all of which contribute to increased fluid transudation.

**Keywords:** assess, knowledge, structured teaching programme, pulmonary edema, nurses

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### **Introduction**

An increase in the amount of filtered fluid secondary to marked increases in pulmonary hydrostatic pressure or an increase in the pulmonary capillary permeability, which causes water and proteins extravasation, or from interruption of the lymphatic drainage, such as what occurs in lung resection surgery. Regardless of the etiology, the resultant fluid accumulation in the lung impairs respiratory gas exchange, resulting in respiratory distress and the need for mechanical ventilation.<sup>1</sup>Edema, in general, means swelling. This typically occurs when fluid from inside blood vessels seeps outside the blood vessel into the surrounding tissues, causing swelling. This can happen either because of too much pressure in the blood vessels or not enough proteins in the bloodstream to hold on to the fluid in the plasma (the part of the blood that does not contain any blood cells.<sup>2</sup> Effective knowledge can prevent the pulmonary edema and complications.

### **Objectives of the Study**

1. To assess the pretest knowledge of staff nurses regarding pulmonary edema.
2. To assess the posttest knowledge of staff nurses regarding pulmonary edema.
3. To assess the effectiveness of Structured Teaching Program by comparing pre and posttest knowledge score on pulmonary edema among staff nurses
4. To find the association between the pre knowledge score with selected demographic variables of staff nurses.

### **Hypothesis**

**H<sub>1</sub>:** There is a significant difference between mean pre-test and post-test knowledge regarding pulmonary edema among staff nurses

**H<sub>2</sub>:** There will be significant association between the pretest knowledge score of staff nurses with selected demographic variables.

### **Conceptual Frame Work**

Conceptual frame work adopted for this study is based on Von Bertalanffy General System Theory

### **Methodology**

The research design adopted for this study was a pre-experimental one group pre-test post-test design and the research approach was an evaluative approach. The sample size consists of 60 Staff Nurses from selected hospitals Gonda, U.P.

### **Description of the Tool**

The tool used for the data collection was structured knowledge questionnaire. The tool was organized into three parts: -  
Part 1: - It consist of socio-demographic profile of the subjects  
Part 2: - It consists of 25 objective types of multiple-choice questions about Knowledge regarding pulmonary edema.  
Part 3: - It consists of STP on Pulmonary edema  
The data was collected by structured knowledge questionnaire and practice checklist and these consisting of three sections.

### **Results**

The findings of the Pre-Test knowledge score of the Staff Nurses regarding pulmonary edema shows that they were able to answer the questions to some extent. Overall mean knowledge scores of respondents were found to be 13.93 (55.72%) with standard deviation 3.075 indicates moderate knowledge of staff nurses regarding pulmonary edema. The post-test Knowledge score of the Staff Nurses regarding Pulmonary Edema after the administration of STP shows that overall mean knowledge scores of respondents were found to be 18.57 (74.28%) with standard deviation 3.116 indicates adequate knowledge of staff nurses regarding pulmonary edema. The level of knowledge shows that in Pretest majority 71.7% of the staff nurses had moderate knowledge and 25% had inadequate knowledge. After administration of the structured teaching program 60% of the

subjects had adequate knowledge, 40% had moderate knowledge regarding pulmonary edema in the post test. The obtained "t" value 13.084 is greater than the table value both at 0.01 level of significance. Therefore, "t" value is found to be significant. Hence it is inferred that there is significant difference between the pretest and posttest knowledge level of staff nurses regarding the pulmonary edema. Association with the variables such as age ( $\chi^2 = 14.457$ ), educational qualification ( $\chi^2 = 8.190$ ), area of work ( $\chi^2 = 7.457$ ) and experience ( $\chi^2 = 13.724$ ) were significantly associated with pretest knowledge scores at 0.05 level of significance. Thus the result stated there is significant association between the pretest knowledge of staff nurses regarding pulmonary edema and selected demographic variables.

### **Conclusion**

The findings of this study support the need for Staff Nurses to understand regarding the various aspects of Pulmonary edema to spread this knowledge to other staff nurses, student nurses, family, colleagues, clients, public and community at large. This study has proved that the Staff Nurses have a remarkable increase in the Knowledge regarding Pulmonary Edema when compared to their previous Knowledge, prior to the implementation of the STP. Thus, for the future outlook there is a need to improve their knowledge by conducting the teaching programmes and demonstration program on this topic.

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