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### **“A Study to assess the effectiveness of structured teaching program on Knowledge of FASTHUGBD among ICU Staff Nurses in Selected Hospital of Pune City.”**

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#### **Abstract**

Continuous efforts are being made to improve the quality of patient care in ICU departments. Protocols have been devised with the aim of enhancing efficiency, safety and quality of care in ICU units. Nevertheless, the usefulness of these protocols can be somewhat limited in complex cases and an alternative approach to improving patient care is via the use of checklists. It has been suggested that the use of checklists in ICU may be effective in improving patient care and safety. The FASTHUGBD mnemonic (**F**eeding, **A**nalgesia, **S**edation, **T**hrombo-prophylaxis, **H**ead-of-bed angle, **U**lcer prophylaxis and **G**lucose control) was proposed to highlight key aspects of care that should be considered at least daily for all ICU patients.

In the present study pretest and posttest knowledge was assessed by implementing the teaching plan on FASTHUGBD among 50 staff nurses in selected hospitals of Pune city. Convenience sampling was used to select the 50 sample. In the study majority of subject was In the present study pretest and posttest knowledge was assessed by implementing the teaching plan on FASTHUGBD among 50 staff nurses in selected hospitals of Pune city. Convenience sampling

was used to select the 50 sample. In the study majority of subject was B.sc nursing (60%) and only 40% were GNM. Only (60%) have 1-5 years of experience in ICU and only 8% have experience between 11 to 15 years. 96% have attended in-service education related to FASTHUGBD and 50% subjects have knowledge about FASTHUGBD through workshops and in-service education. Frequency distribution was used to assess the level of knowledge of staff nurses. 92% having Average knowledge (score 14-26) and 8% having Good knowledge (score 27-40). Paired t-Test was used to assess the effectiveness of intervention at 5% of level of significance and it was shown to be rejection of null hypothesis as p value is less than  $\alpha$  (.003).

Key words: **FASTHUGBD, ICU protocols and Patient safety**

## **INTRODUCTION:**

It was not until the first half of the 20th century that physicians began to show interest in feeding patients incapable of eating enough, either because they should not or could not, to address their increased metabolic needs during severe and prolonged diseases.

The first attempts were carried out at the end of the 19th century. In 1872, Clouston described a method for intragastric feeding, infusing milk, eggs, jelly, alcohol and sugar, and in 1882, Bliss attempted providing food through the rectum. At the beginning of the 20th century, the techniques for gastrointestinal tract access began to improve, and around the 1950s, more refined mixtures started to be used, resulting in major advances, such as the development of foods for astronauts, and that of elementary diets. <sup>2</sup>

Analgesics any drug that relieves pain selectively without blocking the conduction of nerve impulses, markedly altering sensory perception, or affecting consciousness. This selectivity is an important distinction between an analgesic and an anesthetic. Analgesics may be classified into two types: anti-inflammatory drugs, which alleviate pain by reducing local inflammatory responses; and the opioids, which act on the brain. The opioid analgesics were once called narcotic drugs because they can induce sleep. The opioid analgesics can be used for either short-term or long-term relief of severe pain. In contrast, the anti-inflammatory compounds are used for short-term pain relief and for modest pain, such as that of headache, muscle strain, bruising, or arthritis. <sup>3</sup>

Considering the widespread use of sedation for critically ill patients, more large, high-quality, randomized controlled trials of the effectiveness of different agents for short-term and long-term sedation are warranted.

To minimize patient discomfort in the intensive care unit (ICU), sedation has become an integral part of critical care practice. Sedation reduces the stress response, provides anxiolysis, improves tolerance of ventilatory support, and facilitates nursing care. Unfortunately, sedatives have adverse effects, have the potential to prolong mechanical ventilation, and may increase health care costs. An ideal sedative agent would have rapid onset of action, be effective at providing adequate sedation, allow rapid recovery after discontinuation, be easy to administer, lack drug accumulation, have few adverse effects, interact minimally with other drugs, and be inexpensive.<sup>4</sup>

Major orthopedic surgery carries a high risk for venous thromboembolism (VTE)—deep vein thrombosis (DVT) and pulmonary embolism (PE). The major orthopedic surgeries of greatest concern include total knee replacement (TKR), total hip replacement (THR), and hip fracture (HFx) surgeries. PE, an obstruction of a pulmonary artery or its branches usually by an embolic thrombus, is potentially life-threatening and can result in chronic complications with generally poor prognosis, such as thromboembolic pulmonary hypertension. DVTs are the principal intermediate process necessary for surgery-related PE and increase the risk of PE. In addition, about 5 to 10 percent of patients with symptomatic DVTs develop severe post thrombotic syndrome, which may include venous ulcers, intractable edema, and chronic pain; although, these outcomes may take 10 years or more to develop. Estimates suggest that in the contemporary era about 4.7 percent of patients undergoing major orthopedic surgery would have symptomatic VTE without prophylaxis. Although, the rate of postoperative VTE is decreasing over time, likely due in part to a combination of more universal thromboprophylaxis and increasing use of early mobilization and decreased use of postoperative narcotics.<sup>5</sup>

## **STATEMENT OF THE PROBLEM**

“A Study to assess the effectiveness of structured teaching program on Knowledge of FASTHUGBID among ICU Staff Nurses in Selected Hospital of Pune City.”

## **OBJECTIVES OF THE STUDY**

- To assess the knowledge of the nurses regarding FASTHUGBID among ICU staff Nurses in Selected Hospital of Pune City.
- To assess the effectiveness of structured teaching program on FASTHUGBID among ICU staff Nurses in Selected Hospital of Pune City.
- To assess the association of knowledge with selected demographic variables.

## **HYPOTHESIS**

**(H<sub>0</sub>)-** There is no change in the knowledge of staff nurses related to FASTHUGBID after interventional program.

### **Methodology:**

- **RESEARCH APPROACH:** Quantitative approach
- **RESEARCH DESIGN:** Pre- experimental design, (One group Pretest -Posttest design)
- **VARIABLES**

**Dependent variable:** Knowledge regarding FADTHUGBID among ICU staffs

**Independent variable:** Structured teaching about the FASTHUGBUD.

- **SETTING:** Sahyadri hospital, Decan Pune.
- **POPULATION:** Nursing staff who work in ICU settings.

**Target population:** Nurses who works in the Intensive Care Unit at Pune district.

**Accessible population:** Nursing staffs who works in the ICU settings of Sahyadri hospital

- **SAMPLE:** 50 ICU nursing staff who had satisfied the inclusion criteria.

**Sampling Technique:** Purposive sampling technique.

➤ **SAMPLING CRITERIA**

**Exclusion criteria**

- Those who received the training program on FASTHUGBID

**Inclusion criteria**

**Staff nurses:**

- Those who are working in ICU.
- Those who are willing to participate.
- Those who can understand English and Marathi.
- Those who are available the time of data collection

➤ **TOOL**

The following methods were used for development of the tool by the investigator.

- Review of literature from books, journals, other publication and websites.
- Discussion with subject experts like guides and ICU experts.

➤ **VALIDITY OF THE TOOL**

To ensure the content validity, the tool was submitted to eleven experts in the field like nursing administrative in ICU, General physicians, Aestheticians, and one statistician.

➤ **RELIABILITY**

The Reliability of FASTHUGBID knowledge assessment Scale were checked using Karl Pearson co-efficient formula with value 0.9, which was reliable.

**RESULTS:**

**Table 4.1: Description of samples (nurses) based on their personal characteristics**

**N=50**

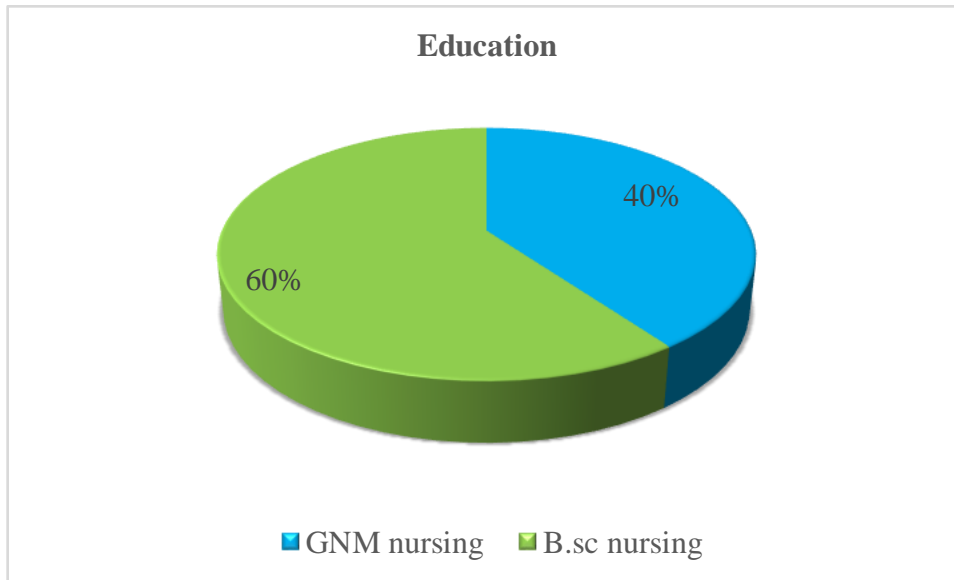
<b>Demographic variable</b>	<b>Freq.</b>	<b>%</b>
<b>Education</b>		
<b>GNM nursing</b>	20	40%
<b>B.sc nursing</b>	30	60%

<b>ICU Experience</b>		
<b>1-5 years</b>	30	60%
<b>6-10 years</b>	16	32%
<b>11-15 years</b>	4	8%
<b>Have you attended any in service education related to FASTHUGBID</b>		
<b>Yes</b>	48	96%
<b>No</b>	2	4%
<b>Previous knowledge / practice of FASTHUGBID</b>		
<b>Yes</b>	50	100%

- 40% of the nurses were GNM nursing and 60% of them were B.Sc. Nursing.
- 60% of them had 1-5 years of ICU experience, 32% of them had 6-10 years ICU experience and 8% of them had 11-15 years of ICU experience.
- 96% of them had attended in service education related to FASTHUGBID.
- All of them had previous knowledge/practice of FASTHUGBID.

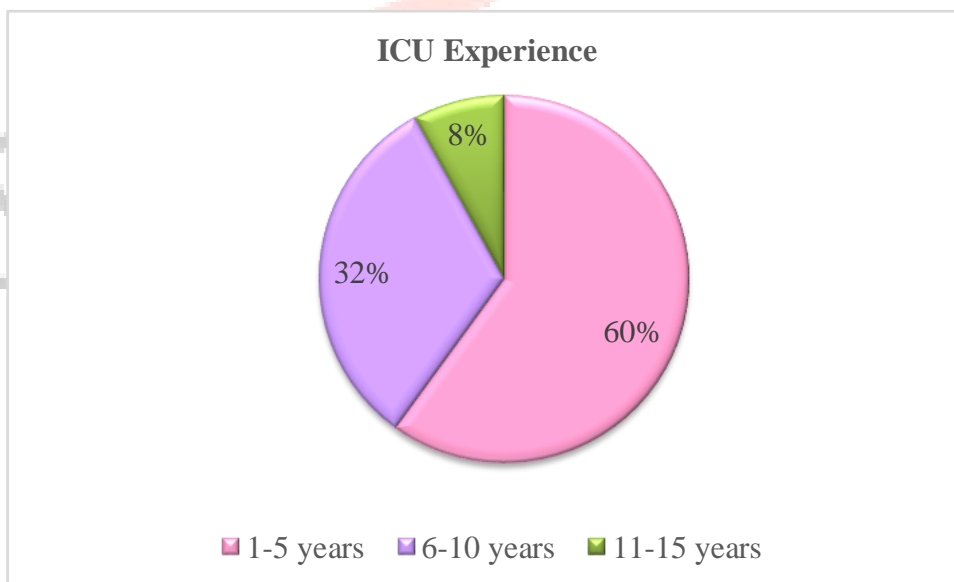
**Figure- 4.1 Pie Diagram Showing Level of Education of ICU Staff Nurses**

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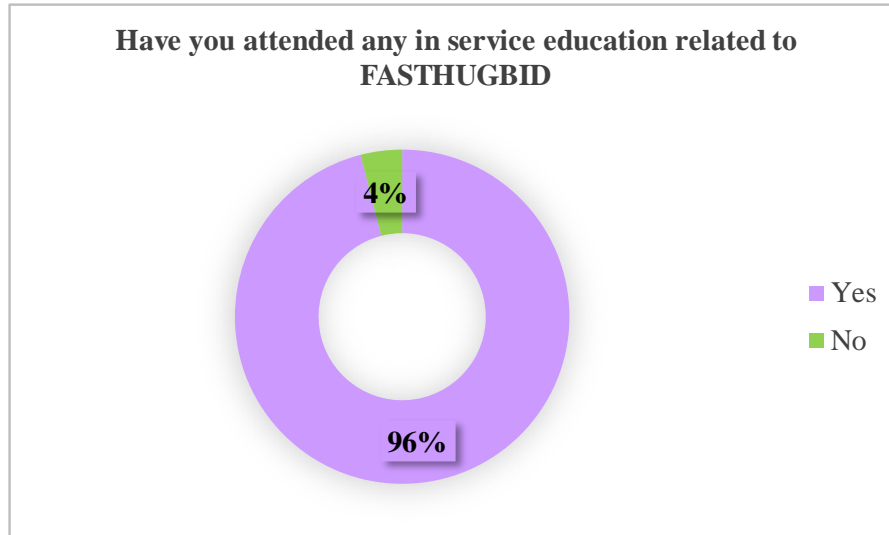
- Above figure no.3 Indicates about level of education of ICU Staff Nurses in which 40% of nurses having GNM nursing and 60% of them were B.Sc. Nursing.

**Figure no.- 4.2 Pie Diagram Showing ICU Experience of Staff Nurses**



- Figure no. 4 Indicates that 60% of staff nurses having 1-5 years of experience, 32% of nurses having 6-10 years of experience and 8% of staff nurses having 11-15 years of ICU experience.

**Figure no. – 4.3 Pie Diagram Showing In Service Education Related To FASTHUGBID**



- Above Pie diagram Indicates that 96% of staff nurses attended in-service education related to FASTHUGBID and only 4% of them have not attended any in-service education regarding FASTHUGBID.

**4.3 Analysis of data related to the knowledge of the nurses regarding FASTHUGBID in Selected Hospital of Pune City.**

**Table 4.2: Knowledge of the nurses regarding FASTHUGBID**

**N=50**

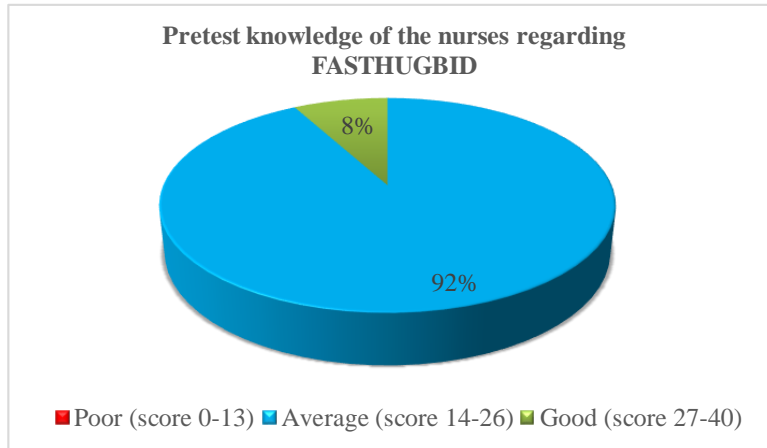
Knowledge	Pretest	
	Freq	%
Poor (score 0-13)	0	0%
Average (score 14-26)	46	92%
Good (score 27-40)	4	8%

- Above table Indicates about Level of Knowledge of staff nurses regarding FASTHUGBID in which 92% having Average knowledge (score 14-26) and 8% having Good knowledge (score 27-40) in pre-test.



**Figure no.- 4.4 pie diagram showing pre-test knowledge of the nurses regarding FASTHUGBID**

n=50



- Above Figure-7 Indicates about the pre-test score of staff nurses regarding level of knowledge about FASTHUGBID in which 92% of them having Average knowledge and 8% of them having Good knowledge.

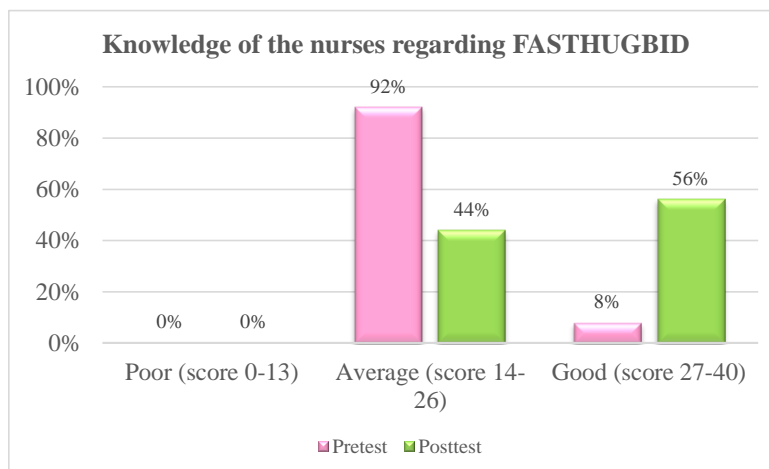
**4.4 Analysis of data related to the effectiveness of FASTHUGBID interventional program among Nurses in Selected Hospital of Pune City.**

**Table 4.3: Effectiveness of FASTHUGBID interventional program among Nurses**

N=50

KNOWLEDGE	PRETEST		POSTTEST	
	Freq	%	Freq	%
<b>Poor (score 0-13)</b>	0	0%	0	0%
<b>Average (score 14-26)</b>	46	92%	22	44%
<b>Good (score 27-40)</b>	4	8%	28	56%

**Figure no.- 4.5 Bar Diagram Showing Knowledge Of Staff Nurses Regarding FASTHUGBID**



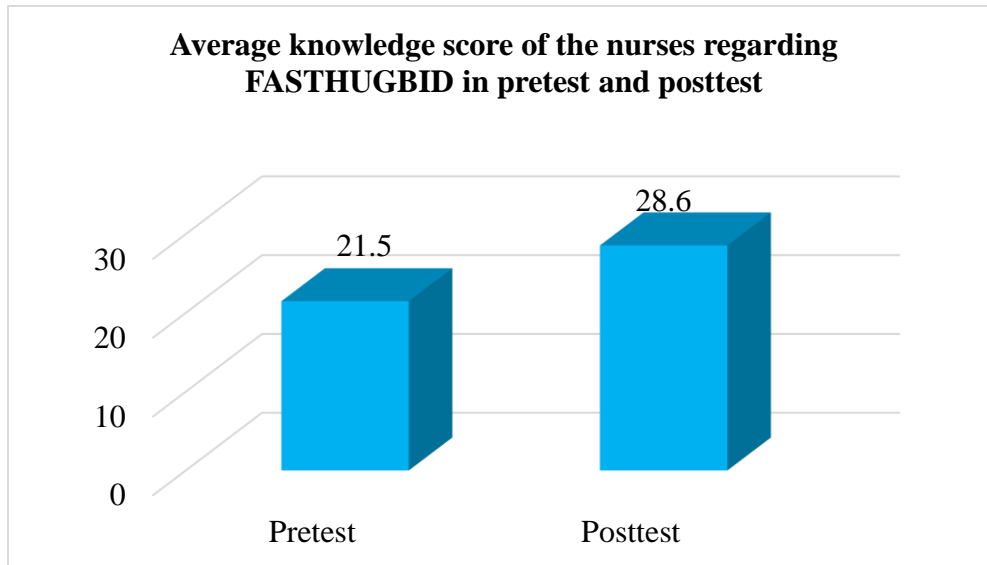
- Bar diagram shows the pretest, Score 92% of them nurses had average knowledge (score 14-26) and 8% of them had good knowledge (score 27-40) regarding FASTHUGBID. In posttest, 44% of them had average knowledge (score 14-26) and 56% of them had good knowledge (score 27-40) regarding FASTHUGBID. This indicates that there is remarkable improvement in the knowledge of the nurses regarding FASTHUGBID.

**Table 4.4: Paired t-test for effectiveness of FASTHUGBID interventional program among Nurses**

**N=50**

	Mean	SD	T	df	p-value
<b>Pretest</b>	21.5	3.4	6.0	49	0.03
<b>Posttest</b>	28.6	7.0			

**Figure no.- 4.6 bar diagram showing average knowledge score of the nurses regarding FASTHUGBID in pretest and posttest**



Bar diagram shows the paired t-test result for effectiveness of FASTHUGBID interventional program among nurses. Average knowledge score in pretest was 21.5 which increased to 28.6 in post-test. T-value for this test was 6 with 49 degrees of freedom. Corresponding p-value was of the order of 0.03, which is small (less than 0.05), the null hypothesis is rejected. It is evident that the FASTHUGBID interventional program was significant in improving the knowledge of the nurse regarding FASTHUGBID.

#### 4.5 Analysis of data related to the association of knowledge with selected demographic variables.

Table 4.5: Fisher's exact test for the association of knowledge with selected demographic variables

N=50

DEMOGRAPHIC VARIABLE		AVERAGE	GOOD	P-VALUE
<b>Education</b>	GNM nursing	19	1	0.641
	B.sc nursing	27	3	
<b>ICU Experience</b>	1-5 years	26	4	0.370
	6-10 years	16	0	

	11-15 years	4	0	
<b>Have you attended any in service education related to FASTHUGBID</b>	Yes	44	4	1.000
	No	2	0	

Table shows the since all the p-values are large (greater than 0.05), none of the demographic variable was found to have significant association with the knowledge of the nurses regarding FASTHUGBID.

### **ETHICAL CONSIDERATION**

- The pilot study and main study were conducted after the approval of the Research Ethical Committee of Symbiosis College of Nursing.
- Written consent was obtained from each nursing staff of ICU before starting the data collection.
- Assurance was given to staffs regarding the confidentiality of data collection.

**FUNDING:** The study is self-funded

**CONCLUSION:** The study revealed the positive impact of intervention program on knowledge of staff nurses

In pretest, 92% of them nurses had average knowledge (score 14-26) and 8% of them had good knowledge (score 27-40) regarding FASTHUGBID. In posttest, 44% of them had average knowledge (score 14-26) and 56% of them had good knowledge (score 27-40) regarding FASTHUGBID. This indicates that there is remarkable improvement in the knowledge of the nurses regarding FASTHUGBID.

Since all the p-values are large (greater than 0.05), none of the demographic variable was found to have significant association with the knowledge of the nurses regarding FASTHUGBID

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