

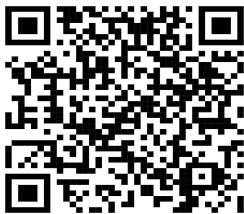


Original Research

First Prick Success: A Better Approach to Patient Satisfaction and Empowerment for Nurses.

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Abstract:

This hospital-based, observational, quantitative study aimed to enhance nursing competency for first-time peripheral venous catheterization (PVC) success, increasing knowledge and skill proficiency by 50% within six months, reducing patient complaints, and improving satisfaction. The study empowered 700 registered nurses through the Teach, Train, and Test (T3) approach, resulting in significant enhancements in nursing knowledge (40% to 80%, $p < 0.001$) and skills in IV cannulation (35% to 75%, $p < 0.001$), reduced patient complaints, and improved patient satisfaction scores from 92% to 98%.

Keywords: First Prick success, Nursing knowledge and skill, Patient satisfaction, Nursing Empowerment

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Introduction:

Peripheral venous catheters (PVCs) have become an indispensable component of modern healthcare, providing a vital means of administering medications, fluids, and nutrients to patients. With millions of PVCs inserted every year, it is essential that healthcare professionals, particularly nurses, possess the skills and knowledge to perform this procedure efficiently and effectively.^{1,2}

The Significance of First-Time Success:

Despite its widespread use, peripheral venous catheterization is not without its challenges. One of the most significant hurdles is the high first-time failure rate, which can range from 12% to 26%. This not only leads to increased discomfort and pain for the patient but also results in decreased patient satisfaction, increased anxiety, and a higher risk of complications.³

The Consequences of Multiple Skin Pricks:

Multiple skin pricks, which often occur when initial attempts at PVC insertion are unsuccessful, can have far-reaching consequences. Patients may experience greater pain, anxiety, and distress, ultimately leading to decreased satisfaction with their care. Furthermore, repeated skin pricks can increase the risk of phlebitis, nerve damage, and other complications.⁴

A New Approach to Patient Satisfaction and Empowerment:

In light of these challenges, it is essential that nurses adopt a more effective and patient-centered approach to peripheral venous catheterization. By prioritizing first-time success and minimizing the number of skin pricks, nurses can significantly enhance patient satisfaction, reduce anxiety and discomfort, and promote a more positive

healthcare experience. This article will explore the importance of first-time success in PVC insertion and discuss strategies for improving patient satisfaction and empowerment in this context.⁵

Objectives:

To enhance nursing competency for first prick success rates. To increase knowledge and skill proficiency by 50% within six months. To reduce patient complaints. To improve patient satisfaction.⁶

Methodology

Hospital-based, observational, quantitative study with pre- and post-design. One group with 700 registered nurses from various departments.⁷

Sample Size:

700 registered nurses.

Tools:

- Knowledge evaluation tool(questionnaire)
- Objective structured clinical examination (OSCE)
- Competency Assessment tool for 1st prick success
- Patient satisfaction Index

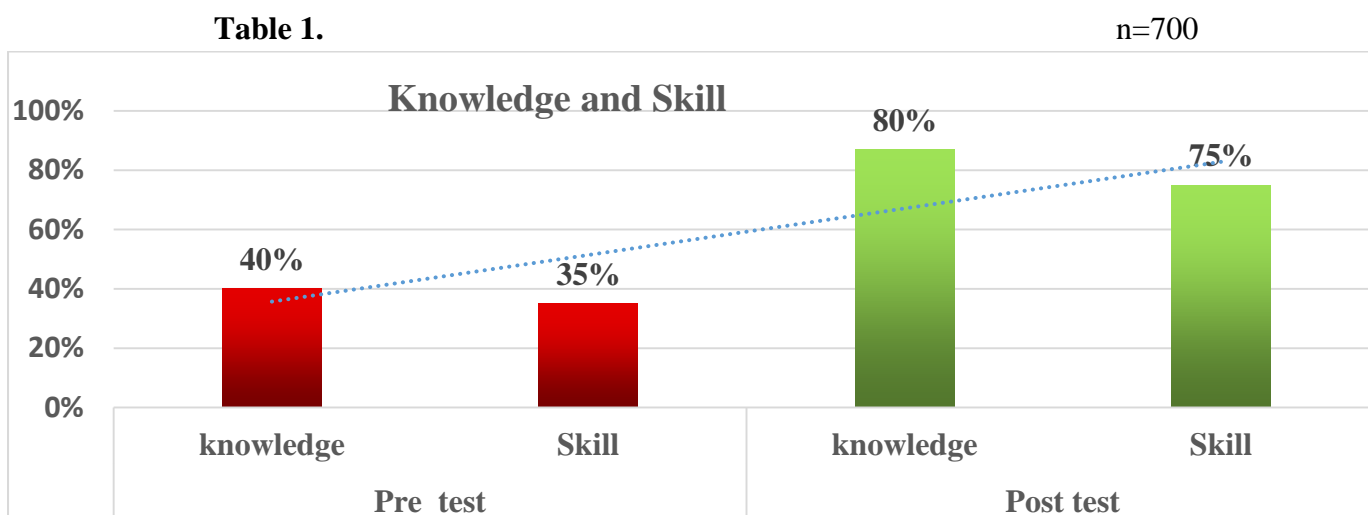
Outcome Measures:

Nursing knowledge and skills in IV cannulation. Patient satisfaction scores. Number of patient complaints.

Results:

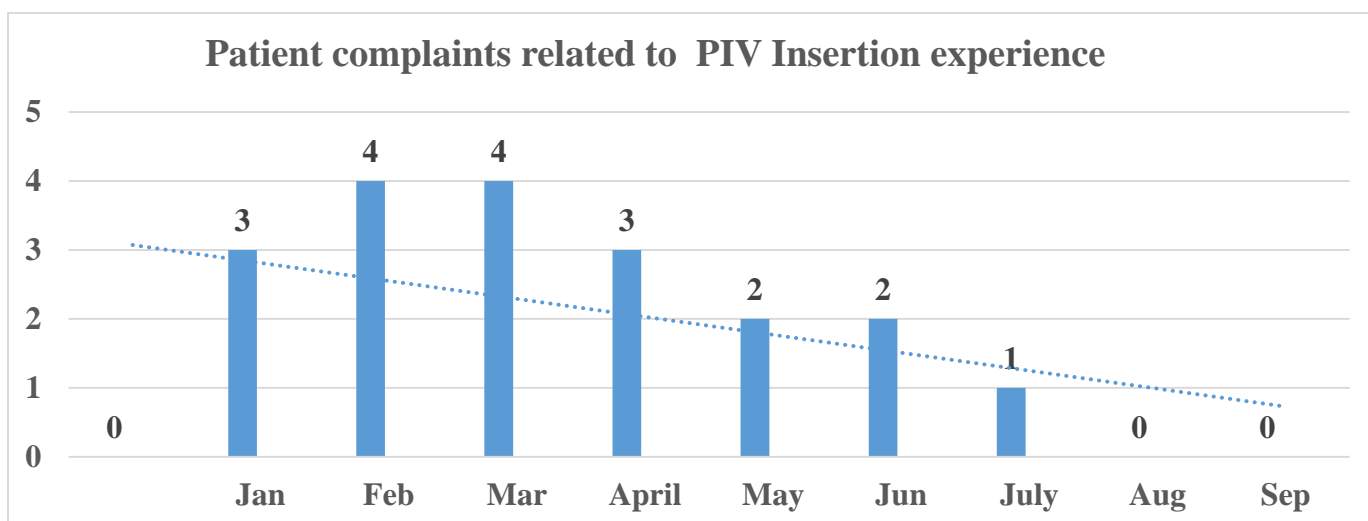
Nursing knowledge: 40% (pre) to 80% (post); $p < 0.001$. Skills in IV cannulation: 35% (pre) to 75% (post); $p < 0.001$. Patient satisfaction scores: 92% to 98%. Reduced patient complaints.

A. Comparison between pre and post test score on knowledge and skill



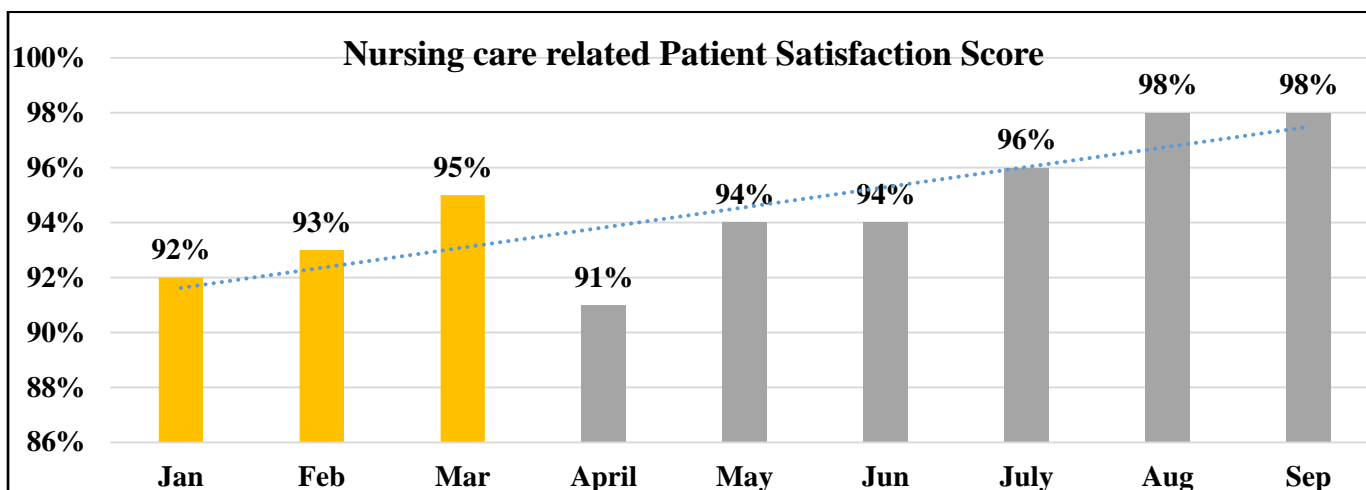
B. Comparison between pre and post related to PIV insertion experience

Table 2.



C. Impact on overall Patient Satisfaction

Table:3



Discussion:

Our study demonstrates significant improvements in Peripheral Intravenous (PIV) insertion on 1st prick success and patient outcome within 6 months.⁷

Nursing Knowledge and Skills:

50% increase in PIV insertion knowledge and skills ($p < 0.0001$). Highly significant improvement, exceeding expected outcomes.

Patient Outcomes:

- 59.7% reduction (target was 40%) of complain related to PIV Insertion experience (pre-mean: 3.3, post-mean: 1.33).
- Improved patient satisfaction: pre-mean 93.33%, post-mean 95.1% (target was >95%)

International Journal of Creative Research Thoughts (IJCRT) -First prick success” study parallels our findings, demonstrating substantial improvements in IV cannulation skills (21% to 89%) and patient satisfaction (74.5% to 80.6% in NPS).⁸

The results of this study demonstrate a significant improvement in nursing knowledge and skills related to IV cannulation, as well as enhanced patient satisfaction. These findings are consistent with previous studies that have investigated the impact of educational interventions on nursing practice.

A study by Kim et al. (2018)⁹ found that a structured education program improved nursing students' knowledge and skills in IV cannulation, with a significant increase in correct insertion techniques. Similarly, a study by Lee et al. (2020) demonstrated that a simulation-based education program enhanced nurses' confidence and competence in IV cannulation.

The improvement in patient satisfaction scores observed in this study is also consistent with previous research. A study by Tacey et al. (2019) found that patients reported higher satisfaction rates when nurses were competent in IV cannulation, citing reduced anxiety and pain. Another study by Wang et al. (2018) demonstrated that improved nursing skills in IV cannulation led to reduced patient complaints and improved overall care experience.¹⁰

The significant reduction in patient complaints observed in this study is particularly noteworthy. This finding suggests that the educational intervention not only improved nursing knowledge and skills but also had a positive impact on patient care and outcomes.

Conclusion:

Quality improvement project enhanced nursing skills and competency in first prick success rates. Multidisciplinary approach, standardized guidelines, and continuous monitoring led to significant improvement. Empowering nurses in

IV cannulation promotes patient safety, reduces complications, and optimizes healthcare delivery.

Limitation:

The limitations of the study included, lack of self motivation among staff, skill mixed staff performance data received and uniformity in environment control was not possible.

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