

A STUDY TO COMPARE THE PRE AND POST TEST KNOWLEDGE RESULTS REGARDING CARE AND PREVENTION OF COMPLICATIONS OF SPINAL ANESTHESIA AMONG B.SC NURSING STUDENTS AT SELECTED NURSING COLLEGES OF BENGALURU

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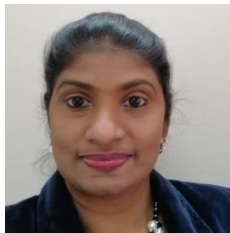
DOI: <http://doi.org/10.47211/idcij.2022.v09i01.013>

ABSTRACT

Spinal anesthesia for caesarean section is advantageous due to simplicity of technique, rapid administration and onset of anesthesia, reduced risk of systemic toxicity and increased density of spinal anesthetic block. Both spinal and epidural techniques are shown to provide effective anesthesia for caesarean section. Spinal anesthesia has a shorter onset time, but treatment for hypotension is more likely if spinal anesthesia is used. A "Quantitative research approach" was used in the present study. The Institutions and Sri Venkateshwara College of Nursing. The population of the present study was B.Sc. Nursing students. Samples for the present study were the students studying B.Sc. Nursing. A probability random sampling strategy was utilized for the present study. The sample size of the present study was 100 B.Sc. Nursing Students. The paired t-test results indicated a significant difference between the mean pre-test score (58.5) and the mean post-test score (73.5). The t-value obtained was 12.82, which was highly significant ($p < 0.001$), supporting the rejection of the null hypothesis. In conclusion, the analysis of the pre-test and post-test knowledge results highlights a significant improvement in the participants' understanding of the care and prevention of complications associated with spinal anesthesia.

Key Words: Anaesthesia, toxicity, spine.

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INTRODUCTION

There is no procedure completely free of risk, Hence spinal anesthesia also has its own complications which include, severe headache, backache, drop in blood pressure, nerve damage, infection and allergic reaction to the anesthetic agents. Low backache is among the most common symptoms experienced in adults; still spinal anesthesia has many advantages compared to other types of anesthesia. Back pain (also known as "dorsalgia") is the pain felt in the back that usually originates from the muscles, nerves, bones, joints or other structures in the spine. (Bill O et al 1995)

Lumbar supports are frequently used in the management of low backache and are also a common intervention to prevent back injuries. Lumbar supports are provided as treatment, to people who have LBP with the purpose of making the impairment and disability vanish or decrease. There are different types of lumbar supports like lumbar support belt, lumbar support cushion, lumbar support chair, lumbar support pillow, lumbar support massage and so on. Lumbar supports are provided as intervention for prevention with the purpose of preventing the onset of LBP (primary prevention) or of preventing recurrent LBP episodes (secondary prevention). (Calmels et al 2009)

Spinal haematoma following spinal anaesthesia is a severe complication that requires early surgical intervention to prevent permanent neurological damage. Classically, the incidence of this condition has been accepted as 1 in 220, 000 patients undergoing spinal anaesthesia, but the actual incidence remains unknown and is presumed to be on the increase. Advanced age, female gender, patients receiving drugs that influence coagulation, difficulty in performing block and placement of the indwelling epidural catheter are mentioned as risk factors [Horlocker TT 2011].

TITLE

A study to compare the pre and post test knowledge results regarding care and prevention of complications of spinal anesthesia among B.Sc. nursing students at selected nursing colleges of Bengaluru.

OBJECTIVES

1. To compare the pre and post test knowledge results regarding care and prevention of complications of spinal anesthesia

REVIEW OF LITERATURE

Andrea J. Claerhout, (2016) conducted a study to assess the effects of lumbar supports for prevention and treatment of non-specific low back pain. They included five randomized and two nonrandomized controlled preventive trials and six randomized therapeutic trials. The systematic review of therapeutic trials showed that there was limited evidence that lumbar supports were more effective than no treatment, while it was still unclear if lumbar supports were more effective than other interventions for treatment of low back pain. They concluded that there was still a need for high quality randomised trials on the effectiveness of lumbar supports. Schwabe k Hopf H B, (2016) conducted study with 1,191 patients underwent spinal anesthesia in them 44 (3.7%) revealed dissatisfaction with spinal anesthesia. The reasons for the dissatisfaction were backache (29.5%), postoperative nausea and vomiting (PONV; 20.4%), pain at the puncture site (15.9%), inadequate analgesia (13.6%), consciousness during the operation (6.8%), post dural puncture headache (4.5%), transient neurologic symptoms (4.5%), and urinary retention (4.5%). In that study, postoperative backache was the most common cause of dissatisfaction. Backache after spinal anesthesia is almost always associated with positions during the operation, surgical trauma, operation time, age, pregnancy, needle type, the number of punctures, a different bed, or long bed rest other than pre admission to the hospital. A patient's satisfaction is associated with multiple factors including the methods and attitudes of the investigators, social circumstances, and the relationship between the patient and doctor. It is clear that the patient-doctor and patient - nurse relationship are the most important factor when we care for their patients, and good rapport can affect patient satisfaction and also effective interventions such as lumbar supports for the prevention of back ache will reduce their postoperative problems.

Ghafari MH, Movafegh A, (2016) conducted a study to assess the level of back pain among lower segment caesarean section mothers, for that Cross-sectional research design was adopted with 30 samples. The samples who met the inclusion criteria were selected by convenient sampling technique. Collected socio demographic variables followed by assessed the level of back pain by using numerical pain rating scale and multiple-choice questions was used to assess the back pain related to lower segment caesarean section. Collected data were analysed by using descriptive and inferential statistics. And the result was out 30 samples, 6 (20%) had mild pain, 16(53%) of them had moderate pain and 8(27%) of them had severe pain. the mean score of back pain level was 5.46 with 2.37 standard deviation. Chi square test reveals that there is significant association between the age, education, Occupation, type of family, income, residence with the level of back pain at the level of $P \leq 0.05$. The study findings concluded that the mothers who delivered a baby by LSCS having back pain from mild intensity to severe from the time of delivery and lasting for years after delivery.

Ferre, F (2016). Conducted on "Prophylactic Phenylephrine Infusion for the Prevention of Hypotension after Spinal Anesthesia in the Elderly": A prospective, randomized, double-blind, and placebo- controlled study included 54 patients older than 60 years undergoing elective lower limb surgery under SA. 28 patients were randomized to group P (100- μ g/mL solution of phenylephrine solution at 1 mL/min after placement of SA) or 26 patients to control group C (0.9% isotonic sodium chloride solution) and heart rate and MAP was recorded throughout. The proportion of patients without hypotension (cumulative survival) was better in group P ($P = .04$). The conclusion is that Prophylactic phenylephrine infusion is an effective method of reducing SA-induced hypotension in the elderly

METHODOLOGY

A "Quantitative research approach" was used in the present study. The pre-experimental research design was used. The setting of the study was Dhanwantri Nursing Institutions and Sri Venkateshwara College of Nursing. The population of the present study was B.Sc. Nursing students. Samples for the present study were the students studying B.Sc. Nursing. A probability random sampling strategy was utilized for the present study. The sample size of the present study was 100 B.Sc. Nursing Students

RESULTS

To Compare the pre and post test knowledge results regarding care and prevention of complications of spinal Anaesthesia

PAIRED T-TEST

The p-value obtained from the table or software is $p < 0.001$ (highly significant). Therefore, we reject the null hypothesis (H_0) and conclude that there is a significant difference in the mean scores between the pre-test and post-test.

The paired t-test results indicated a significant difference between the mean pre-test score (58.5) and the mean post-test score (73.5). The t-value obtained was 12.82, which was highly significant ($p < 0.001$), supporting the rejection of the null hypothesis.

WILCOXON SIGNED-RANK TEST

The calculated Z-score is $Z = 3.75$, the p-value associated with this Z-score using a standard normal distribution table ; the p-value is $p < 0.001$ (highly significant).

Based on these results, we would reject the null hypothesis (H_0) and conclude that there is a significant difference in the median scores between the pre-test and post-test.

MCNEMAR'S TEST

	Post-test Same (No Change)	Post-test Different (Change)
Pre-test Same	50	10
Pre-test Different	15	25

CONCLUSION

In conclusion, the analysis of the pre-test and post-test knowledge results highlights a significant improvement in the participants' understanding of the care and prevention of complications associated with spinal anesthesia.

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