

RESEARCH ARTICLE

Assessment of Nurses' Knowledge Regarding Preoperative Preparation at Rania Teaching Hospital

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ABSTRACT

Background: The goal of preoperative care is to psychologically, physically, and emotionally prepare the patient or caregiver for the procedure. Patients must be informed by nurses the importance of preoperative preparation before day of surgery.

Objectives: To assess nurse's knowledge regarding preoperative preparation at Rania teaching Hospital.

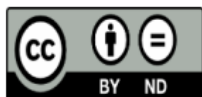
Methodology: Quantitative design, descriptive study was conducted among (32) nurses who work at the surgical wards in Rania teaching hospital regarding pre-operative preparation during the period of 15th January 2019 up to 15th of March 2019. The study instrument was semi-constructed and consisted of (26) items and the data were collected through interviewing techniques with each sample individually. Data were analysed by using (SPSS Version 21).

Results: The study showed that most of the study samples were married females aged between (35-44) years old, who graduated from the institute with barely sufficient. Regarding the main finding (53.1%) of nurses had fair knowledge, (28.1%) of nurses had poor and (18.8%) of nurses had good knowledge. Statistically significant associations were found between age groups, gender, qualification, and years of experience with the level of knowledge.

Conclusion: The study concluded that most of the study samples were adult age, female, married, barely sufficient, about half of nurses had diplomas, more than half of the nurses had less than 5 years of experience, and not participated in training courses related to preoperative care. More than half of the nurses had fair knowledge, and remain had either poor or good knowledge regarding preoperative preparation. Statistically significant associations were found between age groups, gender, qualification, and years of experience with the level of knowledge, and no significant associations were found between marital status, financial status, and training course with the level of knowledge.

Recommendations: The study recommended that to expand the knowledge of nurses working in surgical wards, hospitals should implement particular training programs relevant to the surgical ward and teach how to manage preoperative preparation.

Keywords: Assessment, knowledge, Preoperative Preparation, Rania teaching Hospital



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INTRODUCTION

More than 234 million surgical procedures are performed globally each year (Fudickar et al., 2012). The complexity brought on by an aging population and improvements in surgical technology makes it difficult to provide safe perioperative care. Nearly 50% people aged over 65 has three or more chronic illnesses, and more than 20% of adults live with more than five chronic conditions (Bradway et al., 2012). The patient who is scheduled for surgery, the patient must give instructions as to how to prepare him or herself for the surgery. This may be done by the staff of nurses or physicians from the hospital where the surgery will be performed. Because of their anxiety, the patient may find it difficult to understand or remember the instructions. The nurse has to enhance patient preparation by reinforcing instructions on preoperative fasting, medications, anaesthesia, and skin preparation (DeLamar, 2005).

Before surgery, a health care professional conducts a preoperative evaluation to verify that a person is fit and ready for the surgery (Ravindra and Fitzgerald, 2012; Nicholson et al., 2013). For surgeries in which a person receives either general or local anaesthesia, this evaluation may be done either by a doctor or a nurse trained to do the assessment (Nicholson et al., 2013).

Nurses have a variety of roles and responsibilities associated with the patient's surgical care. Nurses provide care for patients before, during, and after surgical operations; this is collectively called perioperative care nursing. It is a specialized nursing area where a registered nurse works as a team member of other surgical health care professionals. Preoperative preparation and teaching limitations increase the need for postoperative support and managing underlying medical conditions (Matt, 2015). The study aimed to assess nurses' knowledge concerning preoperative care preparation.

Aims of the Study

- To determine socio-demographic characteristics of the study sample.
- To assess Nurses' knowledge regarding pre-operative preparation
- To find out the associations between level of knowledge with socio-demographic characteristics of the study sample such as (age, gender, marital status, qualification, financial status, years of experience, and training course).

METHODOLOGY

Design of the study:

Quantitative design, a descriptive study was conducted to assess nurses' knowledge regarding preoperative preparation during the period 15th January 2019 to 15th of March 2019.

Administrative arrangement:

Official permission was proposed to Rania teaching hospital to obtain facilitation and cooperation during the data collection of this study.

The setting of the study:

This study was conducted at Rania teaching hospital, the governmental teaching hospital located inside Rania city, which receives patients from different areas as well as outside of Rania city, and provides health care services for ill people.

The sample of the study:

A non-probability, convenience sample size of (32) nurses working at surgical wards in Rania teaching hospital. The sample was chosen according to certain inclusions and exclusions criteria:

- Included those nurses who have more than one year of experience in a surgical ward
- Excluding the managers or head nurses. They are being excluded because they are not carried out in surgical ward.

The study instrument:

The questionnaire form was semi-constructive by the researchers based on related review of literature, and previous studies (Liddle, 2012) to measure the variables underlying the present study; mainly to assess nurses' knowledge regarding pre-operative preparation. It consists of two parts:

Part one: was used to collect the socio-demographics of nurses includes (age, gender, marital status, qualification, financial status, number of years of experience, and previous training).

Part two: this part consisted of 19 questions related to assessing nurses' knowledge regarding preoperative preparation. Participants who selected a correct choice from a certain item were considered to have knowledge of that item. Participants who selected the wrong choice from a certain item were considered to have no knowledge of that item.

Validity of the questionnaire:

The face validity of the present study questionnaire was established by (6) experts to investigate the questionnaire for content clarity,

relevancy, and adequacy in order to achieve the present study objectives.

Data collection methods:

The initial step of data collection was identifying nurses according to the criteria of the sample selection. Before interviewing the nurses are assured that the confidentiality and privacy of the answers are maintained. No names, phone numbers, and identification are required. The data were collected through interviewing techniques with each sample individually.

The Pilot study

A pilot study was carried out to check the reliability of the questionnaire which was determined through stability reliability, (test-retest), an approach that was estimated as ($r=0.79$).

Statistical analysis:

The data were analyzed with Statistical Package for the Social Sciences (SPSS) version (21). Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe the sample characteristics. A Chi-square test was used to associate the level of knowledge and socio-demographic characteristics

RESULTS**Table 1: Distribution of the study sample according to socio-demographic characteristics**

| Variables | Item | Frequency | per cent |
|---------------------|-------------------------|----------------|----------|
| Age groups / Years | < 25 | 3 | 9.4 |
| | 25-34 | 3 | 9.4 |
| | 35-44 | 22 | 68.7 |
| | >44 | 4 | 12.5 |
| | Mean \pm SD | 37.8 \pm 6.6 | |
| Gender | Male | 12 | 37.5 |
| | Female | 20 | 62.5 |
| Marital Status | Single | 6 | 18.7 |
| | Married | 26 | 81.3 |
| Qualification | Nursing school graduate | 10 | 31.3 |
| | Diploma | 16 | 50 |
| | Bachelor or higher | 6 | 18.7 |
| Financial status | Sufficient | 4 | 12.5 |
| | Barely sufficient | 22 | 68.8 |
| | Insufficient | 6 | 18.7 |
| Years of Experience | < 5 | 18 | 56.2 |
| | 6-10 | 7 | 21.9 |
| | 11-15 | 3 | 9.4 |
| | > 15 | 4 | 12.5 |
| Training Course | Yes | 15 | 46.9 |
| | No | 17 | 53.1 |
| Total | | 32 | 100 |

Assessment of Nurses' Knowledge Regarding

Table (1) shows that more than two-thirds (68.7%) of the study sample were aged between (35-44) years old, with a mean age of 37.8 ± 6.6 . Related to gender, (62.5%) of the study sample were female and the rest of them were male. According to marital status, (81.3%) of the study samples were married and (18.7%) of the study samples were single. In regard to the qualification of nurses, about half (50%) of nurses had diplomas, (31.3%) of them had nursing school graduates, and (18.7%) had Bachelor's or higher. More than two-thirds of (68.8%) of the study samples were barely sufficient, (18.7%) of study samples were insufficient and (12.5 %) of study samples were sufficient. More than half (56.2%) of the study samples had less than 5 years of experience, followed by (21.9%) samples who had 6-10 years of experience, and (12.5%) of the study sample who had 15 or more years of experience in surgical wards. More than half of nurses (53.1%) have not participated in training courses related to preoperative care.

Table 2: Distribution of the study sample according to pre-operative preparation

| No. | Items | Right | Wrong | M.S | Severity |
|-----|---|-------|-------|------|----------|
| 1 | The nurse told the patient to eat a light meal 8 hours before the operation. | 31 | 1 | 0.96 | H |
| 2 | Rectal enema did by the nurse or his family before the operation. | 25 | 7 | 0.78 | H |
| 3 | The nurse tells the patients NPO immediately before operating room. | 22 | 10 | 0.68 | H |
| 4 | The nurse shaves the hair, especially around the operative site. | 10 | 22 | 0.31 | L |
| 5 | The nurse explains antiseptic solution to cleanse the operation site | 9 | 23 | 0.28 | L |
| 6 | The hair is completely covered with a disposable paper cap. | 13 | 19 | 0.4 | M |
| 7 | The nurse tells the patient to take a warm relaxing bath or take shower | 12 | 20 | 0.37 | M |
| 8 | Checking vital signs (BP., PR., Temp., and RR) immediate pre-operative. | 19 | 13 | 0.59 | M |
| 9 | The nurse tells the patient to remove everything before operation. dentures, hard palate must be inspected, and chewing gum is removed. | 11 | 21 | 0.34 | M |
| 10 | Remove make-up and nail polish. | 12 | 20 | 0.37 | M |
| 11 | Contacts glasses, false lashes, and wig also removed | 12 | 20 | 0.37 | M |
| 12 | Jewelry removed even ring and Hairpins | 15 | 17 | 0.46 | M |
| 13 | The nurse supports the patient emotionally and spiritually. | 19 | 13 | 0.59 | M |
| 14 | Signature and agreement of patient or his family | 16 | 16 | 0.5 | M |
| 15 | The patient wears a hospital gown that is open in the back | 13 | 19 | 0.4 | M |
| 16 | Provide instructions for patients about deep breathing post-operative | 22 | 10 | 0.68 | H |
| 17 | Instruct patient to breathe deeply immediately post-operative. | 19 | 13 | 0.59 | M |
| 18 | The nurse asks the patient about their allergy to drugs | 18 | 14 | 0.56 | M |
| 19 | The nurse asks the patient about his history with anaesthesia. | 15 | 17 | 0.46 | M |

Table (2) indicates that the mean of scores were high on items (1, 2, 3, and 16) while low on items (4, 5) and moderate on the remaining items.

Figure (1) indicates that (53.1%) of nurses had fair knowledge, (28.1%) of nurses had poor and (18.8%) of nurses had good knowledge regarding preoperative preparation.

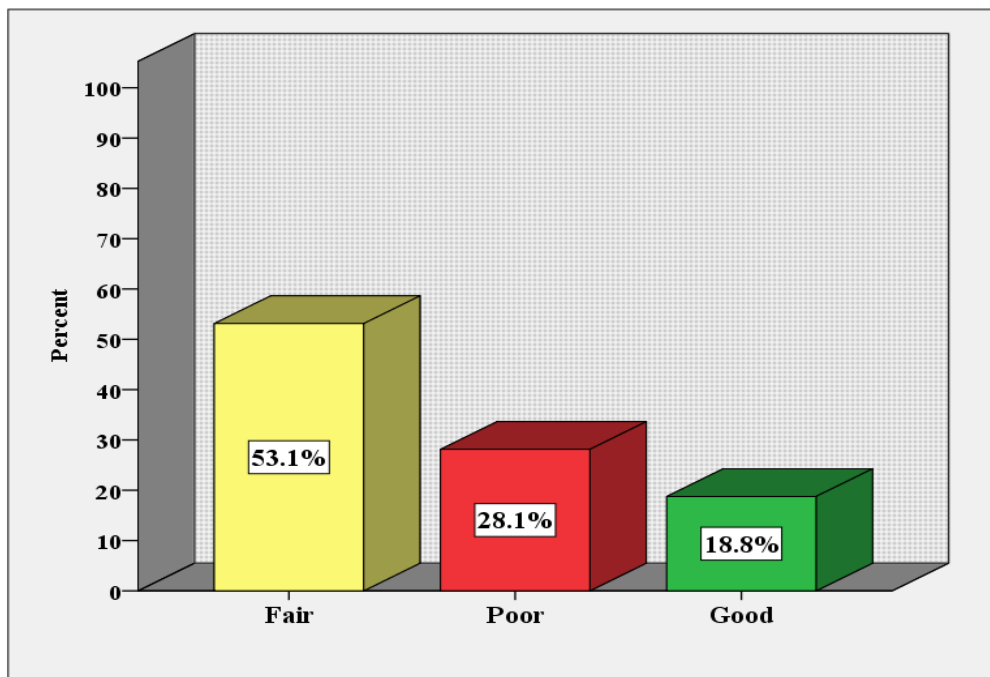


Figure (1) Nurse’s levels of knowledge regarding preoperative preparation

Table 3: Association between nurse's knowledge and socio-demographic characteristics

| Variables | Item | Levels of knowledge | | | | x2-Squar (P-value) |
|--|--------------------|---------------------|----------|---------|-------|--------------------|
| | | Poor | Fair | Good | Total | |
| Age groups | < 25 | 0 (0.0) | 0 (0.0) | 3(100) | 3 | x2= 16.06 (0.01) |
| | 25-34 | 1(33.3) | 1(33.3) | 1(33.3) | 3 | |
| | 35-44 | 7(31.8) | 13(59.1) | 2(9.1) | 22 | |
| | > 44 | 1(25) | 3(75.0) | 0(0.0) | 4 | |
| Gender | Male | 0(0.0) | 10(83.3) | 2(16.7) | 12 | x2= 8.742 (0.013) |
| | Female | 9(45.0) | 7(35) | 4(20) | 20 | |
| Marital status | Single | 1(16.7) | 2(33.3) | 3(50.0) | 6 | x2= 4.735 (0.094) |
| | Married | 8(30.8) | 15(57.7) | 3(11.5) | 26 | |
| Qualification | Nursing school | 7(70) | 3(30) | 0(0.0) | 10 | x2= 30.7 (0.000) |
| | Diploma | 2(12.5) | 13(81.3) | 1(6.3) | 16 | |
| | Bachelor or higher | 0(0.0) | 1(16.7) | 5(83.3) | 6 | |
| Financial Status | Sufficient | 1(25) | 3(75) | 0(0.0) | 4 | x2= 2.16 (0.70) |
| | Barely sufficient | 7(31.8) | 10(45.5) | 5(22.7) | 22 | |
| | Insufficient | 1(16.7) | 4(66.7) | 1(16.7) | 6 | |
| Years of Experience | <5 | 2(11.1) | 10(55.6) | 6(33.3) | 18 | x2= 14.5 (0.02) |
| | 6-10 | 4(57.1) | 3(42.9) | 0(0.0) | 7 | |
| | 11-15 | 0(0.0) | 3(100.0) | 0(0.0) | 3 | |
| | > 15 | 3(75.0) | 1(25.0) | 0(0.0) | 4 | |
| Training Course | Yes | 3(20.0) | 8(53.3) | 4(26.7) | 15 | x2= 1.60 (0.44) |
| | No | 6(35.3) | 9(52.9) | 2(11.8) | 17 | |
| P-value obtained from Pearson Chi-Square | | | | | | |

Table (3) shows that there were statistically significant associations were found between age groups, gender, qualification, and years of experience with the level of knowledge, while no significant

associations were found between marital status, financial status, and training course with the level of knowledge.

DISCUSSION

Part one: Socio-demographic characteristics of study sample

Throughout the course of the data analysis of the current study, the findings showed more than two-thirds (68.7%) of the study sample were aged between (35-44) years old. The result of the current study disagrees with the findings of the study done by Hameed and Mohammad (2018) reported that more than half (56.5%) of the study sample were age group (25-34) years old.

Regarding gender, (62.5%) of the study sample were female and (81.3%) of the study samples were married. This result is agreed with Hinmikanye & Bamishaye (2012) who reported that (70%) of the nurses were females. This could be related to the fact that most the nursing students in universities and institutions in a different area of the Kurdistan region were female and the nature of the nursing profession is a job for females. Related to marital status, this is consistent with the study of Abid et al., (2018) which found that the majority of nurses (74%) were married.

Concerning the qualification of nurses, about (50%) of the study sample had a diploma in nursing, (31.3%) had a secondary nursing school graduate, and (18.7%) had Bachelor's or higher. This result agrees with Hussein & Rada (2016) who found (40%) of nurses had a diploma degree, (28%) of nurses had a diploma degree while only (20%) had a bachelor's degree in nursing.

More than half (56.2%) of the study samples had less than 5 years of experience, followed by (21.9%) of samples who had 6-10 years of experience, and (12.5%) of the study sample more than 15 years of experience. More than half of nurses (53.1%) not participated in training sessions related to pre-operative care.

This result supported by Bushra et al (2007) mentioned that (53%) had expert 1-5 years of experience in surgical wards and more than half of the nurses did not train in a course.

Part two: Nurse's knowledge regarding preoperative preparation

Nineteen questions were utilized to explore nurses' knowledge concerning preoperative preparation. It is clear from table (2) that the mean of scores were high on items (The nurse told the patient to eat a light meal 8 hours before the operation, rectal enema did by the nurse or his family before the operation, the nurse tells the patient to void immediately before going to the operating room, and provide instructions for patients about deep breathing post-operative) while low on items (The nurse shaves the hair, especially around the operative site, the nurse tells the patient to use soap and antiseptic solution to cleanse the area before surgery) and moderate on the remaining items.

It is clear from figure (1) that more than half of study sample (53.1%) had fair knowledge followed by (28.1%) of them had poor knowledge and (18.8%) of the study sample had a good knowledge concerning preoperative preparation. This result disagrees with the study conducted in Nineveh Governorate by Hameed and Mohammed, (2018) who found that the highest percentages (62.5%) of preoperative knowledge as excellent and (37.5%) of knowledge was acceptable.

Part three: Association between nurse's knowledge and socio-demographic characteristics

The current study revealed that significant associations found between age groups and the level of knowledge, it means that a nurse younger age was a good level of knowledge than older age which is inconsistent with the study done AL-Simady (2006) stated that older nurses had more experience and the nurses should be aware of different practical measures in minimizing the problems that might happen and provide the best nursing care for patients. There were statistically significant associations were found between gender and the level of knowledge; it means that male gender had fair knowledge. Highly significant associations were found between qualification and level of knowledge; it means that the nurses who have bachelors or higher education had high level of knowledge. The finding agree with a previous study conducted by Aiken et al., (2003) who mentioned that surgical patients received care for in hospitals in which higher proportions of direct-care RNs had bachelor's degrees experienced a substantial survival advantage over those treated in hospitals in which fewer staff nurses had Bachelor or higher degrees. Similarly, surgical patients who experienced serious complications while hospitalized had significantly more likely to survive in hospitals with a higher proportion of nurses with baccalaureate education. The current study indicated there is significant association between years of experience and knowledge level, indicating that nurses with 11 to 15 years of experience had a moderate level of knowledge. This result is agreed with Likewise, AL-Simady (2006) and Shayma'a (2004) focused the duration of employment in nursing practice to enhance the performance of nurses. However, there were no significant associations found between marital statuses, financial status and training course with the level of knowledge.

CONCLUSIONS

The study concluded that most of the study samples were adult age, female gender, married, barely sufficient, about half of nurses had diplomas, more than half of the study samples had less than 5 years of experience, and not participated in training courses related to preoperative care. More than half of the nurses had fair knowledge, and remain had either poor or good knowledge regarding preoperative preparation. Statistically significant associations were found between age groups, gender, qualification, and years of experience with the level of knowledge, and no significant associations were found between marital status, financial status, and training course with the level of knowledge.

RECOMMENDATIONS:

The study recommended that to expand the knowledge of nurses working in surgical wards, hospitals should implement particular training programs relevant to the surgical ward and teach how to manage preoperative preparation.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

This study was completed following obtaining consent from ministry of health-general directorate health of Raparin and We are as a researcher's transaction confidentially regarding research guidelines.

FUNDING

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AUTHOR'S CONTRIBUTIONS

Study concept, Writing, Reviewing the final edition by all authors.

DISCLOSURE STATEMENT:

The authors report no conflict of interest.

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REFERENCES

- Abid, R. I., Majeed, H. M., & Mohammed, T. R. (2018). Assessment of nurses documentation for nursing care at surgical wards in baghdad teaching hospitals. *Journal of Pharmaceutical Sciences and Research*, 10(10), 2568-2571.
- Aiken, L. H., Clarke, S. P., Cheung, R. B., Sloane, D. M., & Silber, J. H. (2003). Educational levels of hospital nurses and surgical patient mortality. *Jama*, 290(12), 1617-1623.
- Al-Simady, A. (2006). Assessment of Nursing Knowledge and Practice concerning Cardiogenic Shock. *University of Mosul, MSc Thesis*, 74.
- Bradway, C., Trotta, R., Bixby, M. B., McPartland, E., Wollman, M. C., Kapustka, H., ... & Naylor, M. D. (2012). A qualitative analysis of an advanced practice nurse-directed transitional care model intervention. *The Gerontologist*, 52(3), 394-407.
- Bushra K., Khalida A., Siddiq A (2007). Quality Assurance of nursing Performance in Surgical Wards, *Science Journal Nursing*, 20 (1- 2), 100-115.
- DeLamar, L. M. (2005). Preparing your patient for surgery. *Top Adv Pract Nurs*, 5, 1-6.
- Fortunato, N. (2010). *Berry & Kohn's operating room technique*. Delmar, 2004.
- Fudickar, A., Hörle, K., Wiltfang, J., & Bein, B. (2012). The effect of the WHO Surgical Safety Checklist on complication rate and communication. *Deutsches Ärzteblatt International*, 109(42), 695.
- Hameed, R. Y., & Mohammed, S. H. (2018). Nurses' Knowledge and Practice Concerning Pre and Post-Operative Care in Nineveh Governorate. *Mosul Journal of Nursing*, 6(1), 41-50.
- Hinmikaiye, C. D., & Bamishaiye, E. I. (2012). The incidence of low back pain among theatre nurses: a case study of University of Ilorin and Obafemi Awolowo University Teaching Hospital. *International Journal of Nursing Science*, 2(3), 23-28.
- Hussein, S., & Rada, A. (2016). Effectiveness of an educational program on nurses' knowledge concerning preoperative care of children undergoing intestinal obstruction surgery at pediatric teaching hospitals in Baghdad City *International Journal of Scientific and Research Publications*, 6 (11),486-490, ISSN 2250-3153
- Liddle, C. (2012). Preparing patients to undergo surgery. *Nursing times*, 108(48), 12-13.
- Matt Vera BSN, R.N. (2015) Perioperative Nursing, Nurseslabs. Available at: <https://nurseslabs.com/perioperative-nursing/> (Accessed: January 12, 2020).
- Nicholson, Amanda; Coldwell, Chris H; Lewis, Sharon R; Smith, Andrew F; Lewis, Sharon R (2013). "Nurse-led versus doctor-led preoperative assessment for elective surgical patients requiring regional or general anaesthesia". *Reviews* (11): CD010160. [Doi:10.1002/14651858.CD010160.pub2](https://doi.org/10.1002/14651858.CD010160.pub2). [PMID 24218062](https://pubmed.ncbi.nlm.nih.gov/24218062/).
- Ravindra, P; Fitzgerald, J (2012). "Surgical preoperative assessment". *Student BMJ*. 344: d7816. [Doi:10.1136/sbmj.d7816](https://doi.org/10.1136/sbmj.d7816). [S2CID 164318333](https://pubmed.ncbi.nlm.nih.gov/24218062/).
- Shayma'a, N. (2004). Nursing Role During Magnetic Resonance Imaging. *University of Mosul, un published MSc Thesis*, 60.