

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Shendi University



Faculty of Graduate Studies and Scientific Research

Master Degree in Nursing Sciences

Research about:

**Assessment of Nurses Knowledge about
Pre and Post-operative Care in
Pediatric Surgical Unit in Elddamer City**

*A full thesis Submitted in Requirements of Partial Fulfill for The
Master's Degree in pediatric Nursing*

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December - 2016

الآية

بسم الله الرحمن الرحيم

قال تعالى :

﴿وَاخْفِضْ لَهُمَا جَنَاحَ الذُّلِّ مِنَ الرَّحْمَةِ
﴿ وَقُلْ رَبِّ ارْحَمْهُمَا كَمَا رَبَّيَانِي صَغِيرًا ﴾﴾

صدق الله العظيم

سورة الإسراء - الآية (24)



Dedication

*I have dedicated this research to my dear parents
Who gave me all efforts and facilities to my study from
childhood until adulthood.*

Father & Mother

*To the soul of my heart really you are terrific thank you for
supporting through out the process of completing this
degree*

My tiwn Sara

*Who are teaching me giving without take and patience
without tedium.*

To all my teachers:

*Also I would like to dedicate it to my remaining
brothers and sisters for their continuous assistance and
help.*

To all my friends:

*Those who precede me and no longer with me,
Those who precede me and are still among me,*

Those with me,

And to those who will follow me.

Acknowledgment

First the greatest thanks to God Almighty

Allah.

Special thanks to my supervisor:

Dr. Mariam Mohamed Alnageeb

For her support, guideline and patience, thanks a

lot for her.

*Finally I would like to thanks all of
the people who help me in this research*

ملخص البحث

أجريت هذه الدراسة الوصفية في مستشفى الدامر التعليمي لتقييم معرفة الممرضات عن العناية قبل وبعد العملية في جراحة الأطفال في الفترة من أغسطس إلى نوفمبر 2016م. شملت الدراسة 50 ممرض وممرضة وجمعت البيانات عن طريق الاستبيان المكون من 22 سؤال وتم تحليل النتائج بواسطة برنامج التحليل الإحصائي.

من الدراسة اتضح أن معظم الممرضات علي معرفة تامة حول أهمية العناية بالأطفال قبل وبعد العملية بالإضافة إلى ذلك أن (72% و 84%) علي معرفة جيدة بالعناية قبل وبعد العملية بالتوالي، إضافة إلى ذلك أن معظمهن (80%) يملكن معرفة جيدة حول كيفية منع حدوث عدوى الجرح بعد العملية، كما أن (74%) منهن يدركن كل المضاعفات الشائعة التي يمكن أن تحدث بعد العملية.

أنتضح من الدراسة أنه توجد علاقة قوية بين المستوى التعليمي والعناية بالطفل قبل العملية.

وأوصت الدراسة بكتابة برنامج صيام الطفل قبل العملية ووضعه في جراحة الأطفال وتعليم الممرضات عن جميع مراحل العملية.

Abstract

This study was descriptive cross sectional hospital based conducted in Eldadamer educational hospital to assess the nurses knowledge about pre and post-operative care in pediatric surgery in the period from august to November 2016. The study involves fifty nurses, they were total covering; the data was collected by questionnaire which composed of 22 questions and analyzed by a statistical methods SPSS. The study showed that all nurses had good knowledge about the importance of pre and post-operative care, and most of them (72%, 84%) respectively were knowledgeable about pre- and post-operative care, also majority (80%) of them had good knowledge about prevention of wound infection, moreover (74%) of them had good knowledge about common complication, Finally the study revealed that there was significant relationship between the level of education and the knowledge of study group regarding the pre-operative care (p value 0.000).

The study recommended that to establish fasting program in pediatric surgical wall teach nurses about preoperative phase.

List of contents

No	List of content	Page No
1	الآية	I
2	Dedication	II
3	Acknowledgement	III
4	Abstract (Arabic)	IV
5	Abstract (English)	V
6	List of contents	VI
7	List of tables	VII
8	List of figures	VIII
Chapter one		
9	Introduction	1
10	Justification	2
11	Objectives	3
Chapter two		
12	Literature review	4 – 16
Chapter three		
13	Methodology	17 – 19
Chapter four		
14	Results	20 – 33
Chapter five		
15	Discussion	34 – 35
16	Conclusion	36
17	Recommendations	37
Appendix		
18	References	38 – 39
19	Questionnaire	40 – 42

List of tables

Title	Page No
Distribution of study group according to knowledge about definition Pediatric surgery is	22
Distribution of study group according to Knowledge about preoperative phase	23
Distribution of study group according to preadmission testing (PAT)	23
Distribution of study group according to Knowledge about preoperative nursing care	24
Distribution of study group according to preparing the bowel for surgery	24
Distribution of study group according to preparing Skin by	25
Distribution of study group according to preoperative teaching	25
Distribution of study group according to fasting about period	26
Distribution of study group according to transporting the baby to surgical area	26
Distribution of study group according to Knowledge about post – operative nursing care	27
Distribution of study group according to Check Vital signs immediate	27
Distribution of study group according to pain management	28
Distribution of study group according to Assessment of drainage system	28
Distribution of study group according to prevention Surgical wound infections	29
Distribution of study group according to the common complication of surgery	29
Distribution of study group according to Teaching baby or parent about home care on discharge	30

List of Figures

Title	Page No
Distribution of study group according to age	20
Distribution of study group according to educational level	20
Distribution of study group according to Years of experience	21
Distribution of study group according to their work place	21
Distribution of study group according to knowledge about types of surgery	22
Distribution of study group according to prevention complication	30

Chapter One

Introduction

Justification

Objectives

Introduction

Surgery is the use of instruments during an operation to treat injuries, diseases, and deformities. Physicians perform surgical procedures, including surgeons, family practice physicians, or other physicians trained to do certain surgical procedures. Surgery is performed in clinics, physicians' offices, ambulatory surgical centers, and hospitals. Laser and scope technology offer less risk, less invasion, faster recovery, and reduced hospitalization or ambulatory surgery. Today surgery is a safe (have less complication), effective treatment option because of medications such as antibiotics, pre and post-operative care and anesthetics that allow a quicker recovery. ⁽¹⁾

Pediatric surgery offers a unique opportunity to learn about fluid and electrolyte management, since precise calculations are more important in the small child or infant than in the adult. ⁽¹⁰⁾

Surgery is a unique experience of a planned physical alteration encompassing three phases: preoperative, intraoperative, and postoperative. These three phases are together referred to as the perioperative period. Perioperative nursing is the delivery of nursing care through the framework of the nursing process. It also includes collaborating with members of the health care team, making nursing referrals, and delegating and supervising nursing care. ⁽²⁾

All surgery requires careful preparation. The nurse will verify pre-operative instructions to follow and tell baby family what time they need to arrive at the Surgery Center on the day that you're scheduled for surgery. A nurse will admit baby and prepare him for surgery. She/he will be asked to sign necessary forms and verify information. A parent or guardian must sign for a minor (under 18). You will meet with her/his physician and anesthetist prior to surgery. ⁽³⁾

Preoperative care significantly reduced the risk of complications in postoperative pediatric surgery. ⁽⁵⁾

Justification

Pediatric surgery is specialized field. It is important to learn the optimal pre and post-operative care to prevent complication .if the nurses know the safety measures for surgical procedure they can reduce the potentiality of complication .

Objectives

General objective:

Assessment of nurses knowledge about pre and post-operative care in pediatric surgery in Elddamer hospital.

Specific objectives:

1. To assess nurses knowledge about the phases of perioperative period and assessment for each phase.
2. To assess nurses knowledge of perioperative safety important.
3. To assess nurses knowledge of potential complication and nursing intervention to prevent them.
4. To determine association between different variable of the study.

2. Literature review

Surgery is a unique experience of a planned physical alteration encompassing three phases: preoperative, intraoperative, and postoperative. These three phases are together referred to as the perioperative period. Perioperative nursing is the delivery of nursing care through the framework of the nursing process. ⁽²⁾

2.1 Pediatric surgery:

Is primarily concerned with the diagnosis and treatment of surgical diseases of children, and differs from general surgery in that it is an age defined surgical specialty instead of an anatomically defined specialty. Pediatric surgeons are usually trained in the management of general surgical disease of children but also in the treatment of thoracic, head and neck, urologic, and other surgical diseases, whereas most “adult” surgical specialist tend to be confined to the abdomen, chest, or other organ systems alone. As such, pediatric surgery covers a very broad spectrum of disorders and requires one to be familiar with the various organ systems and body areas. ⁽¹⁴⁾

Perioperative nursing involves the care of baby before, during, and after surgery and some other invasive procedures. Historically, perioperative nursing practice was called “operating room nursing” and was limited to transferring babies into and out of operating rooms and handing instruments to surgeons during surgical procedures Perioperative nursing involves the care of babies before, during, and after surgery and some other invasive procedures. Now nurses in all phases of the operative experience actively provide and manage care, teach, and study the care of perioperative babies care . ⁽¹⁾

Ambulatory surgery: may include *outpatient (or same-day)* surgery that does not require an overnight hospital stay or *short stay*, with admission to an inpatient hospital setting for less than 24 hours.

Perioperative phase: period of time that constitutes the surgical experience; includes the preoperative, intraoperative, and postoperative phases.

Preoperative phase: period of time from the decision for surgical intervention is made to when the patient is transferred to the operating room table of nursing care.

Intraoperative phase: period of time from which the patient is transferred to the operating room table to when he or she is admitted to the post anesthesia care unit (PACU)

Postoperative phase: period of time that begins with the admission of the patient to the PACU and ends after a follow-up evaluation in the clinical setting or home.⁽⁹⁾

2.2 Surgical Classifications:

Surgery may be performed for various reasons. A surgical procedure may be diagnostic (e.g. biopsy or exploratory laparotomy). It may be curative (e.g., excision of a tumor or an inflamed appendix) or reparative (e.g., multiple wound repair). Surgery may be reconstructive or cosmetic (e.g., mammoplasty or a facelift), or it may be palliative (e.g., to relieve pain or correct a problem; for instance, a gastrostomy tube may be inserted to compensate for the inability to swallow food). Surgery may also be classified according to the degree of urgency involved: emergent, urgent, required, elective, and optional.⁽⁹⁾

I. Emergent—Patient requires immediate attention; disorder may be life-threatening. (Without delay)

II. Urgent—Patient requires prompt attention. (Within 24–30 h).

III. Required—Patient needs to have surgery.(Plan within a few weeks or months).

IV. Elective—Patient should have surgery.(Failure to have surgery not catastrophic)

V. Optional—Decision rests with patient.(Personal preference).⁽⁹⁾

2.3 Types of surgery:

Surgical procedures are commonly grouped according to:

(a) purpose, (b) degree of urgency, and (c) degree of risk.

Purpose:

Surgical procedures may be categorized according to their purpose.

Degree of Urgency:

Surgery is classified by its urgency and necessity to preserve the client's life, body part, or body function. Emergency surgery is performed immediately to preserve function or the life of the client. Surgeries to control internal hemorrhage or repair a fracture are examples of emergency surgeries. Elective surgery is performed when surgical intervention is the preferred treatment for a condition that is not imminently life threatening (but may ultimately threaten life or wellbeing), or to improve the client's life. Examples of elective surgeries include renal stone, hip replacement surgery, and plastic surgery procedures such as cleft lip and palate. ⁽²⁾

2.4 High risk related to age:

Neonates/infants and older clients are greater surgical risks than children and adults. Age and developmental status affect a child's ability to cope with the physiological and psychological stresses of surgery. Neonates and infants have a higher metabolic rate and a different physiological makeup than adults. These differences cause a substantially different response to a surgical procedure. For example, the blood volume in an infant is small, and fluid reserves are limited. This increases the risk of volume depletion during surgery, resulting in inadequate oxygenation of body tissues. Because of the infant's relatively large body surface area and immature temperature regulator mechanisms, the risk of hypothermia during surgery is significant. Other organ systems, such as the kidneys, liver, and immune system, also have not achieved maturity in infants, affecting their ability to metabolize and eliminate drugs and resist infection. ⁽²⁾

2.5 Perioperative Nursing Activities:

Preoperative Phase:

2.5.1 Informed consent: the patient's or family (according to baby age) autonomous decision about whether to undergo a surgical procedure; based on the nature of the condition, the treatment options, and the risks and benefits involved.⁽⁹⁾

2.5.2 Preadmission Testing

preadmission testing (PAT): diagnostic testing performed before admission to the hospital.

Initiates initial preoperative assessment (assess all system of baby body).

Initiates teaching appropriate to baby's needs (breathing exercise, coughing exercise, turning and lifting). Involves family in interview.

Verifies completion of preoperative testing. Verifies understanding of surgeon-specific preoperative orders. (e.g., bowel preparation, vital sign, preoperative shower, fasting). Assesses baby's need for postoperative transportation and care.⁽⁹⁾

2.5.3 Admission to Surgical Center or Unit:

Completes preoperative assessment (assess all system of baby body).

Assesses for risks for postoperative complications. Reports unexpected findings or any deviations from normal. Verifies that operative consent has been signed (by baby or his/her family). Coordinates baby family in teaching with other nursing staff. Reinforces previous teaching. Explains phases in perioperative period and expectations. Answers baby's and family's questions. Develops a plan of care.⁽⁹⁾

2.5.4 Preoperative fluid guidelines:

1. Children undergoing same day surgery or day of surgery admission procedures generally do not require preoperative intravenous fluids. NPO instructions should have been given to the child/parents during their preoperative visit . The final decision as to NPO status will be left with the attending pediatric anesthesiologist.

2.5.5 FASTING GUIDELINES:

(Regular meal 8 hours, Light meal 6 hours, Non-human milk 6 hours, Infant formula 6 hours, Breast milk 4 hours, Clear liquids 2 hours.)

2. children who are in the hospital prior to surgery may require preoperative hydration, including patients undergoing bowel prep or the child with preexisting fluid deficits (i.e., peritonitis, vomiting or diarrhea, fever, etc.). These losses should be assessed and replaced with an appropriate isotonic fluid, such as normal saline or Ringer's lactate prior to going to the operating room.

3. Patients on intravenous hyperalimentation preoperatively are best managed by slowly reducing the TPN and then changing to crystalloid IV fluids with 5-10% dextrose prior to going to the operating room. Most children can then be started back on TPN within 24 to 48 hours postoperatively, depending on their degree of hyperglycemia and stress response. ⁽¹⁰⁾

2.5.6 Normal values for vital signs and urine output pre - then post-operative in children:

Infant (0-1year) respiration less than 60 breath/minute, systolic blood pressure more than 60 mm/Hg, pulse rate less than 160 beat/minute, urine output 2ml /kg /hr.

Toddler (1-3years) respiration less than 40 breath/minute, systolic blood pressure more than 70mm/Hg, pulse rate less than 150 beat/minute, urine output 1.5ml /kg /hr.

Preschool age (3-5 years) respiration less than 35 breath/minute, systolic blood pressure more than 75 mm/Hg , pulse rate less than 140 beat/minute, urine output 1ml /kg /hr.

School age(6-12years) respiration less than 30 breath/minute, systolic blood pressure more than 80 mm/Hg , pulse rate less than 120 beat/minute, urine output 1ml /kg /hr.

Adolescent period (more than 12years) respiration less than 30 breath/minute, systolic blood pressure more than 90 mm/Hg, pulse rate less than 100 beat/minute ,urine output 0.5ml /kg /hr. ⁽¹³⁾

2.5.7 Bowel preparation:

(“bowel prep”) means cleaning poop and mucous from the intestines. This is done to get the bowel ready for surgery. Bowel prep helps to decrease the chances of other medical problems, such as an infection. It also helps your child heal faster after surgery.

It may be uncomfortable for your child. Symptoms he or she may have are: (nausea, vomiting , abdominal fullness, cramps , frequent, large and watery stools) Bowel prep may take longer if your child has health conditions. Your child may also need to be admitted to the hospital for monitoring and to receive IV fluids to prevent any complications associated with dehydration. ⁽¹⁶⁾

There are many different ways to clean out the bowel before surgery.

1. Early prep is started 48 to 72 hours before surgery. This is usually done at home before child comes to the hospital for surgery.

- The child may need to have enemas, take laxatives and/or drink only clear liquids.
- A clear liquid is almost anything that you can see through. Examples of a clear liquid include water, fruit juices (apple juice), soft drinks (Sprite), sports drinks (Gatorade), tea, chicken broth .
- An enema involves putting fluid into your child’s anal opening, mucous fistula, or ostomy to help remove stool. Early preparation would usually be done at home as an outpatient. ⁽¹⁶⁾

2. Another method might involve your child coming to the hospital one day before surgery.

- During this time, a cleansing fluid will be given to your child. The amount of fluid your child gets will depend on his or her weight. This fluid is called Golytely or Nulytely. It has electrolytes in it that keep your child from getting dehydrated

before surgery. It also helps to remove stool from the intestines. The fluid works well and quickly to clean out child's intestines.

- Sometimes children are unable to drink the large amount of fluid needed. Your child may have a nasogastric (NG) tube placed to get the fluid. A nasogastric tube is a small tube inserted through your child's nose into their stomach that allows us to give fluid directly into his or her stomach. Note: See NG teaching tool.
- The child will have an intravenous (IV) line to get IV fluids. This will keep your child from getting dehydrated.
- Labs will be drawn before surgery.
- Child will begin stooling shortly after getting the cleansing fluid. The goal of the bowel prep is for the stool to become clear or watery. After the dose of fluid is given and the stool is clear, the bowel prep is nearly finished.
- Child may then have an enema to remove any leftover stool from the intestines.
- Last, your child will get antibiotics. These antibiotics will be given through the NG, by mouth, and/or through the IV. This will help prevent infection after surgery. ⁽¹⁶⁾

2.5.8 Preparing the Skin before Surgery:

A surgical site infection is an infection that occurs in the area where an operation has been performed. There are some things that you can do to decrease your risk of a surgical site infection, such as reducing the bacteria (“germs”) on your skin. You have been given some special disposable cloths moistened with 2% Chlorhexidine gluconate (CHG) antiseptic solution to help prepare your skin for surgery. ⁽¹⁸⁾

Please read and follow these instructions for bathing and skin care the night before your surgery.

Have clean freshly laundered bed sheets, towels and pajamas ready for use the evening prior to surgery.

Do not shave your pubic hair the day before or the day of surgery.

If you would like to warm wipes prior to use, please place closed packet in a bowl of warm water at bathwater temperature. Do not microwave.

Directions:

The night before surgery, shower or bathe with soap & warm water, and wash your hair.

Wait at least one hour and be completely dry before applying the wipes.

Open the package: Using clean scissors, cut off the end seal of the package and discard the foam piece.

For each package, remove two cloths at a time, and place onto a clean surface.

Ask another adult for assistance with your skin prep process if it is helpful.

Wipe your skin as shown in the diagrams on the back side of this sheet. Use one cloth for each area of your skin as indicated by the numbers on the diagram.

Avoid contact with eyes, ears, mouth, internal genitalia, and any cuts or open areas of the skin.

But, DO wipe the superficial skin and groin area (the creases where the legs meet the body).

After Care:

Discard wipes in trash can. After using the wipes, let skin air dry. Your skin will feel sticky until dry. ⁽¹⁸⁾

2.6 The day before surgery:

All patients must be “NPO” – no food or liquids, not even water – after midnight on the evening prior to surgery, except infants under one year of age, who should be awakened and offered Gatorade or Pedialyte between midnight and 2:00 a.m. so that they do not become dehydrated. ⁽¹⁹⁾

Please be sure to notify the pediatric surgery office immediately should your child develop a fever or cold or be exposed to a contagious disease such as chicken pox or measles. If it proves preferable to cancel or postpone surgery, it is very

important that the time which has been reserved in the operating room for your child's procedure be utilized by another patient. There are many children with serious conditions who are waiting in line and can benefit from this opportunity. ⁽¹⁹⁾

2.7 In the Holding Area.

Assesses patient's status; baseline pain and nutritional status. Reviews chart. Identifies baby. Verifies surgical site and marks site per institutional policy.. Establishes intravenous line. Administers medications if prescribed. Takes measures to ensure baby's comfort. Provides psychological support. Communicates baby's emotional status to other appropriate members of the health care team. ⁽⁹⁾

2.8 The psychosocial care of children in the perioperative area:

Preoperative psychological care:

Children's perceptions of the operating theatre.

The effect of hospitalization on children.

Models of care.

The presence of parents.

Play in the operating theatre suite.

Emotional, social and spiritual needs of the patient. ⁽¹¹⁾

2.9 Intraoperative Phase:

Maintenance of Safety:

Maintains aseptic, controlled environment. Effectively manages human resources, equipment, and supplies for individualized patient care Transfers baby to operating room bed or table. Positions the patient.(Functional alignment.. Exposure of surgical site). Applies grounding device to baby . Ensures that the sponge, needle, and instrument counts are correct. Completes intraoperative documentation.

Physiologic Monitoring:

Calculates effects on baby of excessive fluid loss or gain. Distinguishes normal from abnormal cardiopulmonary data. Reports changes in baby's vital signs. Institutes measures to promote norm thermal.

Psychological Support (Before Induction and When baby's Conscious):

Provides emotional support to baby. Stands near or touches baby during procedures and induction. Continues to assess baby's emotional status. ⁽¹⁵⁾

2.10 Postoperative Phase:

Transfer of baby to Post anesthesia Care Unit or pediatric unit:

Communicates intraoperative information. Identifies baby by name. States type of surgery performed. Identifies type of anesthetic used. Reports baby's response to surgical procedure and anesthesia. Describes intraoperative factors (e.g., insertion of drains or catheters; administration of blood, analgesic agents, or other medications during surgery; occurrence of unexpected events). Describes physical limitations. Reports baby's preoperative level of consciousness. Communicates necessary equipment needs. Communicates presence of family and/or significant others. ⁽¹⁵⁾

2.11 Postoperative Assessment Recovery Area:

Determines baby's immediate response to surgical intervention. Monitors baby's physiologic status. Assesses baby's pain level and administers appropriate pain relief. Maintains patient's safety (airway, circulation, prevention of injury). Administers medications, fluid, and blood component therapy, if prescribed. Provides oral fluids if prescribed for ambulatory surgery patient. Assesses baby's readiness for transfer to in-pediatric surgical unit or for discharge home based on institutional policy. ⁽¹⁵⁾

2.11.1 Pediatric Surgical Unit:

Continues close monitoring of baby's physical and psychological response to surgical intervention. Assesses baby's pain level and administers appropriate pain relief measures. Provides teaching to baby or (her/his family) during immediate recovery period. Assists baby in recovery and preparation for discharge home. Determines baby's psychological status. Assists with discharge planning. ⁽⁴⁾

2.11.2 Home or Clinic:

Provides follow-up care during office or clinic visit or by telephone contact. Reinforces previous teaching and answers babies and family's questions about surgery and follow-up care. Assesses babies response to surgery and anesthesia and their effects on body image and function. Determines family's perception of surgery and its outcome. ⁽¹²⁾

2.12 Body temperature:

Child who had been in theatre for a long period are at risk of hypothermia. Shivering can be due to anesthesia or a high temperature indicative of an infection, while a drop in temperature might indicate a bacterial infection or sepsis. Patients' temperature should be monitored closely and action taken to return it to within normal parameters.

- » Use a Bair Hugger (forced-air blanket) and blankets to warm the patient if their temperature is too low;
- » Choose an appropriate method to cool the patient if their temperature is too high (antipyretics/fanning/tepid sponging). ⁽⁶⁾

2.13 Complication:

They range from energy-sapping fatigue to potentially fatal blood clots. Here are eight of the most common.

1. Pain:

Pain is less a complication than a simple fact of life following surgery. “Pain often depends on the degree of invasiveness,”

2. Partially Collapsed Lung (Atelectasis):

A very common complication after surgery, it occurs when baby is not able to breathe in enough air to fill the lungs.

3. Blood Clots:

Clots most often occur following orthopedic procedures(e g hip dislocation). morbidly obese baby, and immobile babies are most at risk for clots, which usually form in the legs.

Warning signs include swelling in the affected leg and calf pain. Shortness of breath and chest pain may be signs that the clot has moved to the lungs. ⁽⁷⁾

4. Fatigue and Lack of Energy:

This is something that babies often underestimate, “Some babies expect that they can be discharged and get right back to play . But general anesthesia causes fatigue that can last for some time, and energy levels will also take time to get back to normal.”

5. Anesthesia complication :

It may keep you from feeling pain during a procedure, but anesthesia comes with its own set of unpleasant risk factors ,More common side effects are nausea, sore throat, and sleepiness. ⁽⁷⁾

6. Confusion :

Most babies wake up after surgery feeling a little fuzzy, but they quickly regain their clarity as the anesthesia wears off.

However, some babies experience a much more serious state of confusion, or delirium.

7. Infection:

Most of those infections are minor, affecting only the skin around the surgical incision.

Particularly tough to treat are infections caused by MRSA (methicillin-resistant *Staphylococcus aureus*), a bacteria that resists some antibiotics. In hospitals, babies who have undergone surgery are the most vulnerable to such infections.

The good news is that hospitals are reporting fewer MRSA infections these days. Your best protection against infection is to make sure everything you come into contact with is clean. If that means reminding your doctor to wash his hands or the equipment he uses, don't hesitate to do so. ⁽⁷⁾

2.14 Prevention of Surgical Wound Infections:

The initial dressing for surgical wounds is applied in the operating room using sterile aseptic technique. Postoperative orders indicate when to change the dressing. Sterile technique should be used. The wound is monitored with every dressing change for signs of infection to prevent any complication. ⁽⁸⁾

Methodology

Study design:

This descriptive hospital based study was done to assess nurses knowledge about pre and post-operative care from August to December 2016.

Study area:

This research was done in Eiddamer town, which is located 100 kilometer southern to the Shendi town, northeast ream Sudan, it lies on the right (east) bank of the Nile river, about (300KM) north east of Khartoum. Culturally the population of Eiddamer is a mixture of the various cultures that occur in Sudan though the Northern tribes, particularly ElGaalien, are predominant.

There several general center for different services and purposes , also it is various faculties as education commerce, community.

Eiddamer has one hospital which have different department and provide good health sciences for this town population.

The pediatric surgical unit was done at all time for emergency situation but it has two day (Monday, Wednesday) for elective surgery like un descending tests.

Setting:

Eiddamer educational hospital was established in 1967 by Hussein Mohammed Ahmed sharfy. It had many department and units (medicine male and female, surgery male and female, ENT, ICU, Isolation, pediatric, obstetric ward, theater, minor, ophthalmological unit, dental unit.

Study population:

This study include all nurses worked in Eldammer educational hospital.

Sample size and sampling technique:

The sample size was covering (50) all nurses in Eldammer educational hospital during period from August to November 2016.

Data collection tool:

The data was collected by closed ended questionnaire, designed by researcher based on reviewing of literature, it consist of four section the first section contain (1– 4) questions designed to collected socio demographic data, the second section (5 – 6) question designed to collected knowledge of nurses regarding the pediatric surgery, and third section (7 – 14) question designed collect knowledge regarding preoperative care, and four section designed to collect knowledge regarding post-operative care.

Scoring system:

Scoring system was established by researcher which the data was distributed in three categories to measure the level of nurses knowledge about pre and post-operative care: if the nurse respond to (4-3 choice it consider good knowledge), (2-1) choices consider fair knowledge); and (1 choice consider poor knowledge).

Data collection technique:

The data collection during 2 weeks and every question was take 5-10 minute and no missing questionnaire. Each questionnaire was explained for them then let them to choose the answer according to their knowledge.

Data analysis technique:

After the data collected it coded, organized, categorized, and transferred into specially designed forms so as to be suitable for computer finding using soft program the statistical package for social sciences (SPSS version 22) following data entry , checking and verification process were carried out to avoid any errors during the data entry tabulated in tables and figures using frequencies and percentage. And was used for statistical analysis Chi-square for qualitative data. For all tests, the significance level will be set at $p < 0.05$.

Ethical consideration:

The permission has been approved from by ethical committee of research in the faculty of post graduate and scientific research, the committee reference number 16 / 10 / 2016 , I was explain the questioner to each nurse alone.

4. Results

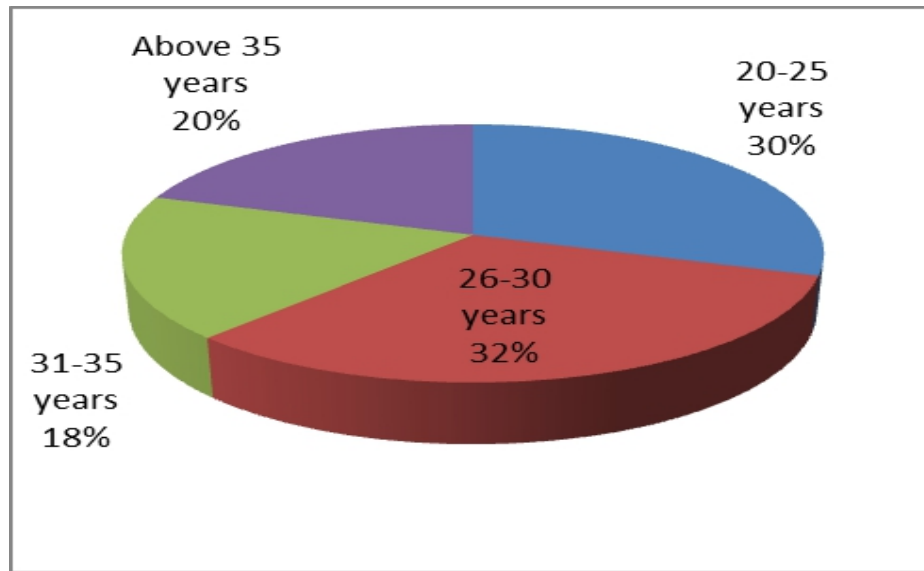


Figure No (1): Distribution of study group according to their Age:

Figure No (1) showed 30% of nurses their age range between (20-25) year, 32% range (26-30)years, 18% range between (31-35) years, and 20% had more than 35 years.

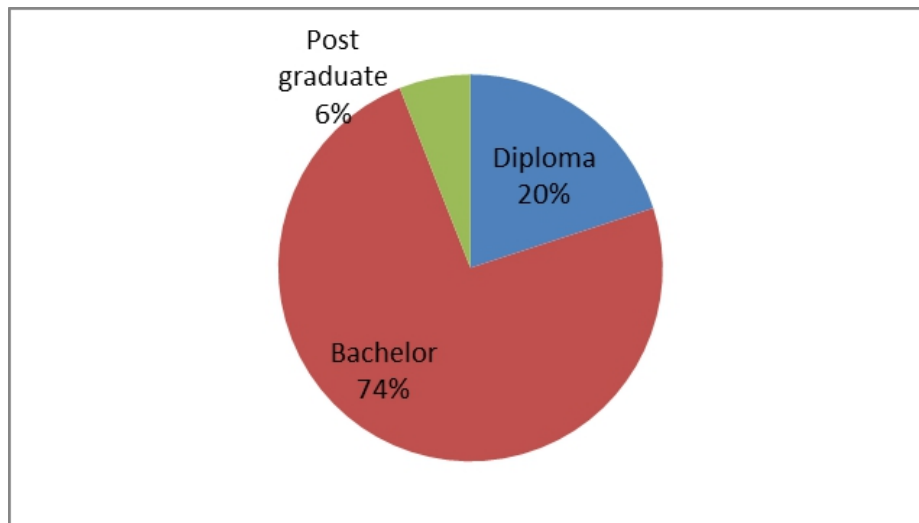


Figure No (2): Distribution of study group according to their educational level:

Figure No (2) showed 20% of nurses had diploma qualification, 74% have bachelor qualification , 6% had post graduate qualification.

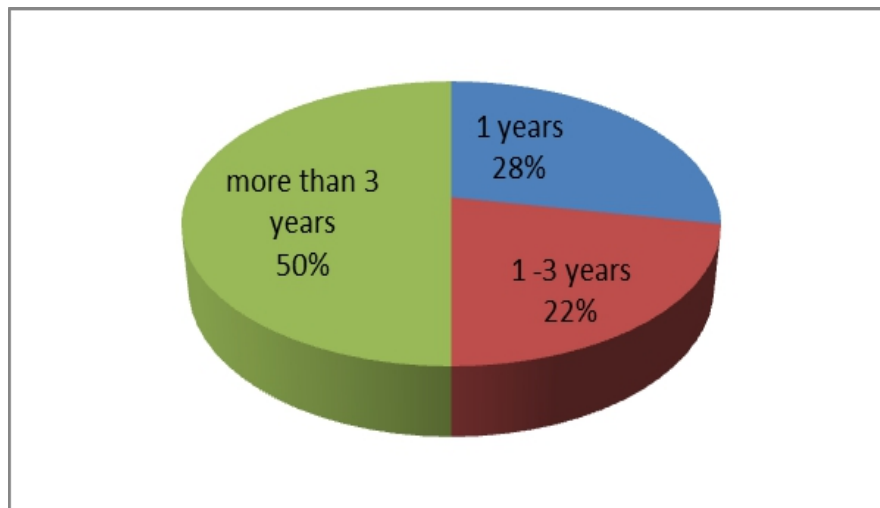


Figure No (3):Distribution of study group according to years of experience:

Figure No (3) showed 28% of nurses had one Year of experience, 22% had 1-3:Years of experience, 50% have more than 3Years of experience.

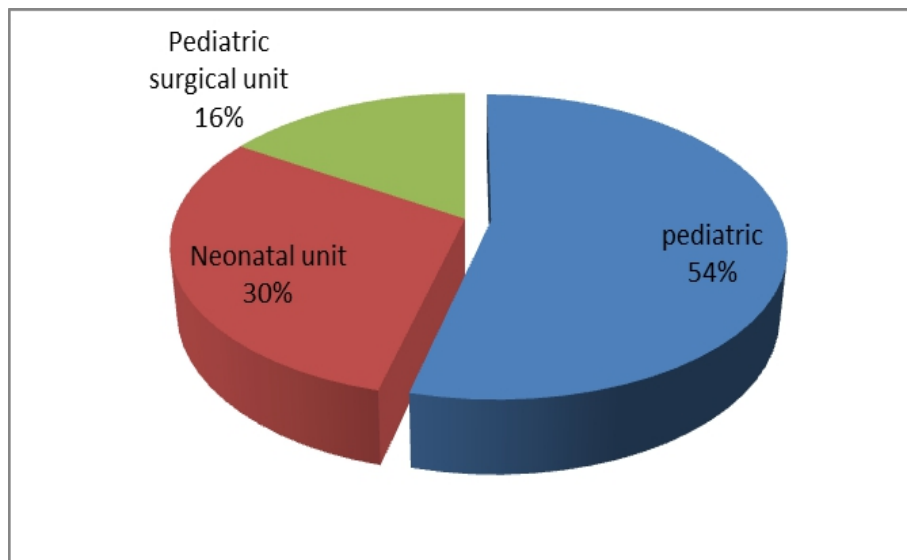


Figure No (4):Distribution of study group according to their work place:

Figure No (4) Showed 54% of nurses worked in pediatric unit, 30% in neonatal unit, 16% in pediatric surgical unit .

Table No (1): Distribution of study group according to knowledge about definition of Pediatric surgery is:

Knowledge	Frequency	Percent
Good	31	62%
Fair	8	16%
Poor	11	22%
Total	50	100%

Table No (5) showed that 62% of nurses had good knowledge about pediatric surgery definition, 16% had fair knowledge, and 22% had poor knowledge.

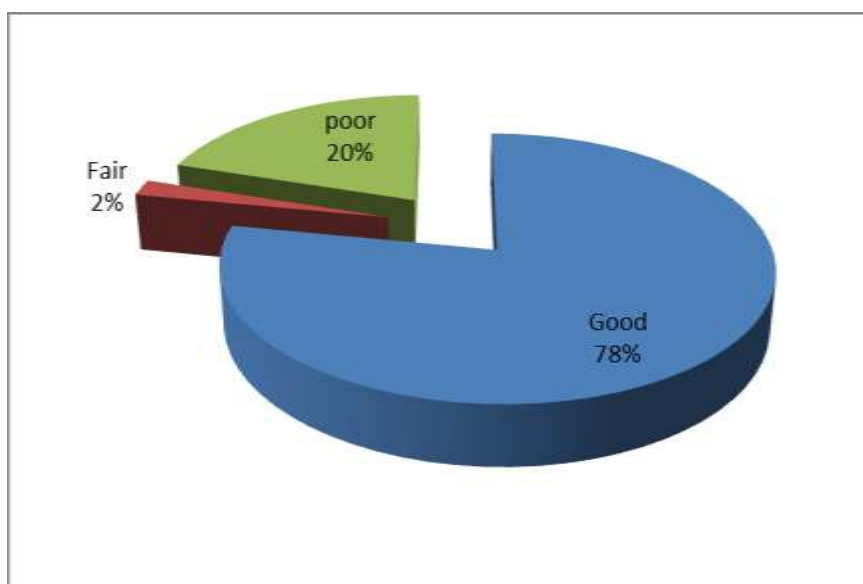


Figure No (5): Distribution of study group according to knowledge about types of surgery:

Figure No (5) showed that 78% of nurses had good knowledge about type of pediatric surgery, 2% had fair knowledge, and 20% had poor knowledge.

Table No (2): Distribution of study group according to Knowledge about preoperative phase:

Knowledge about preoperative phase	Frequency	Percent
Good	27	54%
Fair	16	32%
poor	7	14%
Total	50	100%

Table No (2) showed 54% of nurses had good knowledge about preoperative phase,32%had fair knowledge, and 14% had poor knowledge.

Table No (3): Distribution of study group according to preadmission testing (PAT):

knowledge about preadmission testing	Frequency	Percent
Good	35	70%
Fair	5	10%
poor	10	20%
Total	50	100%

Table No (3) showed 70% of nurses had good knowledge about preadmission testing,10% had fair knowledge, and 20% had poor knowledge.

Table No (4): Distribution of study group according to Knowledge about preoperative nursing care:

Knowledge about preoperative nursing care	Frequency	Percent
Good	36	72%
Fair	7	14%
poor	7	14%
Total	50	100%

Table No (4) showed 72% of nurses have good knowledge about preoperative nursing care, 14 %have fair knowledge, and 14% had poor knowledge.

Table No (5) Distribution of study group according to their knowledge about bowel preparation :

Knowledge about preparing bowel for surgery	Frequency	Percent
Good	30	60%
Fair	15	30%
Poor	5	10%
Total	50	100%

Table No (5) showed 60% of nurses had good knowledge about preparing the bowel for surgery, 30% had Knowledge ,and 10% had poor knowledge.

Table No (6): Distribution of study group according to their knowledge about skin preparation :

knowledge about preparing the skin for surgery	Frequency	Percent
Good	44	88%
Fair	1	2%
Poor	5	10%
Total	50	100%

Table No (6) showed 88% of nurses had good knowledge about preparing the skin for surgery, 2% had fair knowledge, and 10% had poor knowledge.

Table No (7): Distribution of study group according to their knowledge about preoperative teaching:

knowledge about preoperative teaching	Frequency	Percent
Good	38	76%
Fair	7	14%
poor	5	10%
Total	50	100%

Table No (7) showed 76% of nurses have good knowledge about preoperative teaching, 14% have fair knowledge, and 10% have poor knowledge.

Table No (8):Distribution of study group according to their knowledge about duration of fasting :

Knowledge about fasting period	Frequency	Percent
Good	15	30%
Fair	15	30%
poor	20	40%
Total	50	100%

Table (8) showed 30% of nurses had good knowledge about fasting period, 30 %had fair knowledge, and 40% had poor knowledge.

Table No (9):Distribution of study group according to transporting the baby to surgical area:

knowledge about rout of Transporting	Frequency	Percent
Good	22	44%
Fair	16	32%
poor	12	24%
Total	50	100%

Table No (9) showed 44 %of nurses had good knowledge about rout of Transporting the baby to surgical area, 32 % had fair knowledge, and 24 % had poor knowledge.

Table No (10): Distribution of study group according to Knowledge about post –operative nursing care:

Knowledge about post –operative nursing care	Frequency	Percent
Good	42	84%
Fair	2	4%
poor	6	12%
Total	50	100%

Table No (10) showed 84% of nurses had good knowledge about post –operative nursing care , 4% had fair knowledge, and 2% had poor.

Table No (11): Distribution of study group according to assessment of vital signs :

Time of taking vital sign	Frequency	Percent
Every 15 minutes	26	52%
30 minutes	13	26%
One hours	11	22%
Total	50	100%

Table No (11) showed 52% of nurses had taking vital sign every 15 minutes nursing care, 26% had taking vital sign every 30 minutes, and 22% had taking vital sign every 60 minutes.

Table No (12): Distribution of study group according to pain management:

Knowledge about pain management	Frequency	Percent
Good	32	64%
Fair	9	18%
Poor	9	18%
Total	50	100%

Table No (12) showed 64% of nurses had good knowledge about pain management, 18% had fair knowledge, and 18% had poor knowledge.

Table No (13): Distribution of study group according to assessment of drainage system by:

knowledge about drainage system assessment	Frequency	Percent
Good	37	74%
Fair	7	14%
poor	6	12%
Total	50	100%

Table No (13) showed 74% of nurses had good knowledge about drainage system assessment, 14% had fair knowledge, and 12% had poor knowledge.

Table No (14): Distribution of study group according to prevention surgical wound infections:

Knowledge about prevention of Surgical wound infections	Frequency	Percent
Good	40	80%
Fair	3	6%
Poor	7	14%
Total	50	100%

Table No (14) showed 80 % of nurses had good knowledge about prevention of Surgical wound infections, 14% had fair knowledge, and 12% had poor knowledge.

Table No (15): Distribution of study group according to the common complication of surgery is:

knowledge about common complication of surgery	Frequency	Percent
Good	37	74%
Fair	6	12%
poor	7	14%
Total	50	100%

Table No (15) showed 74 % of nurses had good knowledge about common complication of surgery, 30% had fair knowledge, and 40% had poor knowledge.

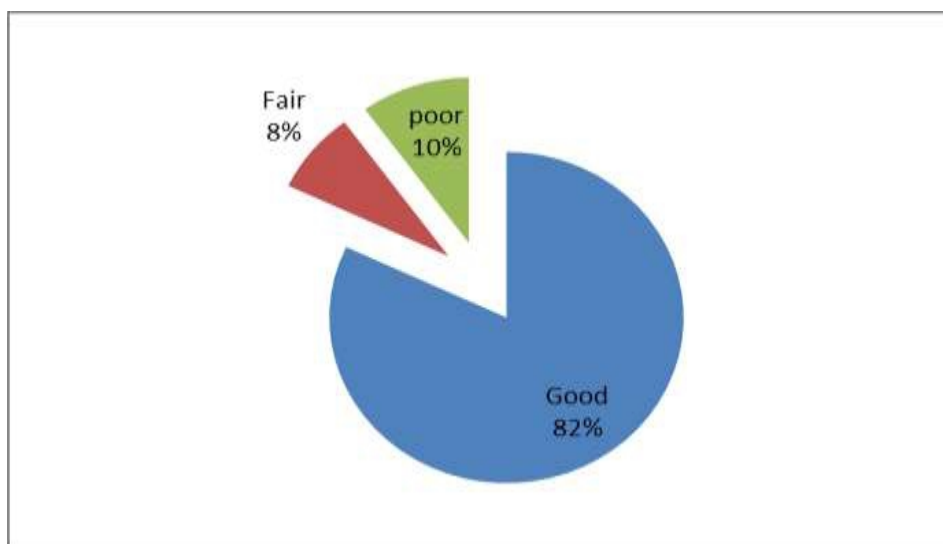


Figure No (6): Distribution of study group according to their knowledge about prevention of complication:

Table No (6) showed 82% of nurses had good knowledge about prevention of complication, 14 %had fair knowledge,and12% had poor knowledge.

Table No (16): Distribution of study group according to teaching parent about home care on discharge:

Knowledge about home care teaching on discharge	Frequency	Percent
Good	39	80%
Fair	4	8%
Poor	7	12%
Total	50	100%

Table No (16) showed 80% of nurses had good knowledge about home care teaching on discharge, 8% had fair knowledge, and12% had poor knowledge.

Table no (17): Distribution of study group according to relation between years of experience and knowledge about preoperative nursing care:

Years of experience		knowledge about preoperative care			Total	Asymp. Sig. (2-sided)
		Good	Fair	Poor		
1 year	Count	4	6	0	10	0.000
	% of Total	8.0%	12.0%	0%	20.0%	
1 – 3 years	Count	30	1	6	37	0.001
	% of Total	60.0%	2.0%	12.0%	74.0%	
More than 3 years	Count	2	0	1	3	0.676
	% of Total	4.0%	0.0%	2.0%	6.0%	
Total	Count	36	7	7	50	
	% of Total	72.0%	14.0%	14.0%	100.0%	

Table no (17) showed there was highly significant relation between years of experience and knowledge about preoperative nursing care.

Table no (18): Distribution of study group according to relation between qualification and preoperative teaching tabulation:

Qualification		Preoperative teaching			Total	Asymp. Sig. (2- sided)
		Good	Fair	Poor		
Diploma	Count	8	1	1	10	.865
	% of Total	16.0%	2.0%	2.0%	20.0%	
Bachelor	Count	27	6	4	37	.738
	% of Total	54.0%	12.0%	8.0%	74.0%	
Post graduate	Count	3	0	0	3	.786
	% of Total	6.0%	0.0%	0.0%	6.0%	
Total	Count	38	7	5	50	
	% of Total	76.0%	14.0%	10.0%	100.0%	

Table no (18) showed there was no signification relation between qualification and preoperative teaching tabulation.

Table no (19): Distribution of study group according to relation between knowledge about preoperative nursing care and knowledge about post – operative nursing care:

Knowledge about preoperative nursing care		Knowledge about post –operative nursing care			Total	Asymp. Sig. (2-sided)
		Good	Fair	Poor		
Good	Count	34	1	1	36	0.0000
	% of Total	68.0%	2.0%	2.0%	72.0%	
Fair	Count	6	1	0	7	0.000
	% of Total	12.0%	2.0%	0.0%	14.0%	
Poor	Count	2	0	5	7	0.000
	% of Total	4.0%	0.0%	10.0%	14.0%	
Total	Count	42	2	6	50	
	% of Total	84.0%	4.0%	12.0%	100.0%	

Table no (19) showed there was highly signification relation between knowledge about preoperative nursing care and knowledge about post –operative nursing care.

Discussion

This study was done in Elddamer educational hospital from Augustus to December 2016 data collection of data by questioner “50 nurses” were included to assess nurses knowledge about pre and post-operative care.

Pediatric surgery is primarily concerned with the diagnosis and treatment of surgical diseases of children, and differs from general surgery in that it is an age defined surgical specialty instead of an anatomically defined specialty.

This study clarified that near three quarter (74%) of studied group had bachelor degree, and half (50%) of them had more than three year of experience. In regard to knowledge about definition of pediatric surgery this study clarified that about two third (62%)of nurses their knowledge was good. And most of them (78,70%),)had good knowledge about types of surgery and preadmission this study was agree with previous study The preoperative and postoperative care of the pediatric surgical patient is considered under the headings of elective surgery, urgent surgery, surgery for trauma, and other emergency surgery. ⁽¹⁹⁾.

In related to knowledge of studied group about pre-operative care this study illustrated that less than half (40%) had poor knowledge about fasting period this study was disagree with previous study All patients must be “NPO” – no food or liquids, not even water – after midnight on the evening prior to surgery, except infants under one year of age, who should be awakened and offered Gatorade or Pedilayte between midnight and 2:00 a.m. so that they do not become dehydrated. ⁽¹⁶⁾, this study showed more than half (60%) had good knowledge about bowel preparation and majority of them (88%) had good knowledge about preparing skin this study was agree with previous study A surgical site infection is an infection that occurs in the area where an operation has been performed. There are some things that you can do to decrease your risk of a surgical site infection, such as reducing the bacteria (“germs”) on from skin. You have been given some special disposable cloths ⁽¹⁷⁾.

In relation to knowledge of studied group about post-operatively care this study illustrated that less than quarter (22%) had taking vital sign in uncorrected time, more than half (64%) had good knowledge about pain management, and about three quarter (74%) had good knowledge about drainage system assessment.

In related to knowledge of studied group about surgical complication, about three quarter, (74%) of study group had good knowledge about common complication, majority (80%) of nurses had good knowledge about prevention of wound infection this study was agree with previous study These antibiotics will be given through the NG, by mouth, and/or through the IV. This will help prevent infection after surgery ⁽¹⁶⁾. And majority of them (82%) had good knowledge about prevention of common complication also this study was agree with previous study Preoperative anxiety in young children undergoing surgery is associated with a more painful postoperative recovery and a higher incidence of sleep and other problems. ⁽¹⁸⁾.

Finally the study revealed that there was highly significant relationship between the educational level and the knowledge of study group regarding the pre-operative care.

Conclusion

The study represent that all nurses were knowledgeable about the important of pre and post-operative care, and most of them (72%, 84%) had knowledgeable about pre- and post-operative care respectively.

Also majority (80%) of nurses had good knowledge about prevention of wound infection, moreover (74%) of them had good knowledge about common complication.

Finally the study reveal that there was no significant relationship between the years of experience and the knowledge of study group regarding the pre-operative care (p value 0.676).

Recommendations

This study recommend that:

to head nurse:

- Give the nurses extra lecture in pediatric surgery.
- Continuous training for the nurses about pediatric surgical cases.
- Let the fasting program written in pediatric surgical wall.

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Shendi university

Faculty of graduate studies and Scientific research

Questionnaire to assess nurses knowledge about pre and post-operative care

Part one: sociodemographic data:

1) Age:

- a) 20-25 () b) 26-30 () c) 31-35 () d) above 35years ()

2) Qualification:

- a) diploma () b) bachelor () c) post graduate ()

3) Years of experience:

- a) 1years () b) 1-3years () 3) more than 3years ()

4) Department:

- a) pediatric unit () b) neonatal unit () c) pediatric surgical unit ()

Part two: knowledge about pediatric surgery:

5) definition Pediatric surgery is:

- a) primarily concerned with the diagnosis and treatment of surgical diseases of children ()
- b) differs from general surgery in that it is an age defined surgical specialty instead of an anatomically defined specialty ()
- c) specialized field of surgery for treatment of condition that can be surgically to neonate ,children ,or adolescent. ()
- d) treatment and prevention of surgical conditions in fetus 28week of gestation to adolescent at puberty. ()

6.Types of surgery:

- (a) purpose () (b) degree of urgency, and () (c) degree of risk. ()

Part three: knowledge of the nurses about pre-operative:

7. knowledge about Preoperative phase:

- a) start when the decision for surgical intervention is made . ()

- b) end when the patient is transferred to the operating room table. ()
- c) period before baby enter the theater ()
- d) start from baby admitted surgical unit. ()

8) Preadmission testing (PAT):

- a) assess all system of baby body ()
- b) Initiates teaching appropriate to baby's needs ()
- c) Involves family in interview. ()
- d) Verifies completion of preoperative testing. ()

9) Knowledge about preoperative nursing care:

- a) baby and parent education () b) managing nutrition and fluid. ()
- c) preparing the bowel for surgery. () d) preparing the skin. ()

10) Preparing the bowel for surgery by:

- a) administration of enema () b) fasting (NPO) ()
- c) give medication as order () d) insertion of NG Tube for suction ()

11) Preparing skin by:

- a) observation of Skin integrity () b) assess skin for sign of infection ()
- c) cleaning ()
- d) decrease risk of a surgical site infection (use disposable clothes) ()

12) Preoperative teaching:

- a) coughing exercise. () b) deep breathing () c) turning (change position) ()
- d) encourage mobility and active body movement ()

13) Fasting about:

- a) Regular meal 8 hours. () b) Light meal 6 hours. ()
- c) Non-human milk 6 hours, Clear liquids 2 hours . ()
- d) Infant formula 6 hours, Breast milk 4 hours. ()

14) Transporting the baby to surgical area:

- a) association with baby () b) transfer on stretcher ()
- c) transfer with co patient ()

Part four: postoperative care:

15) knowledge about post-operative nursing care:

- a) Assess level of consciousness () b) Assess breathing . ()
- c) Assess operation site () d)) Assess urine output. ()

16) Check vital sings immediate:

- a)every 15 minutes () b) 30 minutes () c) one hours ()

17) pain management by :

- a) position () b) medication as order () c)bonding () d)assurance ()

18) Assessment of drainage system by:

- a)color and amount () b)odor () c) consistency () d) function ()

19) To prevent Surgical Wound Infections:

- a) The initial dressing for surgical wounds is applied in the operating room using sterile aseptic technique. () b) Sterile technique should be used. ()
- c) The wound is monitored with every dressing change for signs of infection to prevent any complication. () d) observe any sign of infection early ()

20)the common complication of surgery is:

- a) Fatigue and Lack of Energy ()
- b) Anesthesia Effects(nausea, sore throat, and sleepiness) ()
- c) Blood Clots and Partially Collapsed Lung (Atelectasis) ()
- d) infection. ()

21) Prevent complication by:

- a) put baby on optimal position () b) deep breathing exercise ()
- c) coughing exercise () d) splint site of operation when coughing ()

22) Teach baby or parent about home care on discharge:

- a) continue follow up () b) monitor sign of infection ()
- c) take medication as order.() d) observe any change in eating or bowel habits()