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Title:

**Awareness of intensive care nurses regarding the
bowel protocol of critically ill patients at Omdurman
Military Hospital 2018**

**This submitted for fulfillment for the requirement for the degree of master in
critical care nursing.**

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Dedication

*Is dedicated to my best friends,
who have always been a constant source of
support and encouragement during the challenges of my whole college
life.*

*Also to my brother and my sister whom I am truly grateful for having in
my life, This work is also dedicated to my mother ,
who have always loved me unconditionally and whose good examples
have taught me to work hard for the things that I aspire to achieve.*

Acknowledgment

*All my thanks are in the most gracious and the most merciful
In this instance, I extended my thanks, deep sincere gratitude and honest
appreciation to my supervise*

Dr: higazi awed

*For his kindness, good guidance, valuable direction and generous advice
for participation in this study*

*My thanks are also extended to my colleagues in the critical and
emergency unit, faculty of post-graduation nursing science, university of
shand.*

*I feel indebted to many people who participated and helped me in this
work.*

ABSTRACT

Background :-gastrointestinal motility disturbances are common in critically ill patients abnormalities in gastric emptying and diarrhoea are well studied and have a considerable impact in critically ill patients' progress.

OBJECTIVE :- The aim of this study was to study awareness of the nurses working in the intensive care setting towards the bowel protocol used for the critically ill patients .

.Methodology:-

Descriptive hospital based study design in the form of an online survey was conducted for the nurses working in the intensive care unit. Data were analysed using simple descriptive statistics and qualitative data a content analysis.

Result :-the present study is need for further education regarding the importance of bowel management in critically ill patients.

Conclusion :-The findings of this study indicated that even though many of the nurses were experienced, there still remain concerns regarding bowel management with issues of lack of knowledge and awareness, lack of accountability and responsibility and poor attitudes of staff

.Recommendations :-were made to increase education and staff awareness with regular audits and vigilant supervision. Also further studies related to this concept are recommended preferably in a different setting.

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CHAPTER ONE

Introduction

1.1 Introduction:

Patients in the intensive care unit are critically ill and are commonly on life support system , such as mechanical ventilation medication to stabilize their hemodynamic parameter .

They are usually unable to eat or drink and are feed through a nasogastric tube.

With the priority being resuscitation and life support , normal physiological functions, and requirement can be over ridden , one of which is bowel function

There are no set guidelines nationally recognized for the management of the bowel.(palliative medicine 2008,22;796-807)

But most institutions have a bowel protocol in order to facilitate and promote the bowel function of these patient.patients.

Bowl care is one of thew essential aspects of nursing care in intensive care in intensive care patients.

Nursing intervention foe bowel care are based mostly on customs and practices and there is very little research avidness to support efficient bowel care .

Patients in the intensive care setting have very limited mobility, which decrease the gut motility and have poor dietary intake secondary to nil by mouth stutes for various different procedures.

The frequent use antibiotic treat infection and analgesic for pain and discomfort result in either constipation or diarrhea.

Good bowel care improves patients comfort and also helps in reducing nausea and vomiting.

Constipation and diarrhea the most common and present major problem for intensive care patients .

Constipation defined decrease in the bowel movement with dry and hard stool , usually painful different to pass.

Immobility , dehydration and lack of fiber in diet increase the risk of constipation in intensive patients.

Studies have found that constipation resulted in failure to wean from mechanical ventilator .

Prolonged intensive care stay and increased mortality in incidence of constipation report to be between 16% and 83%.(asai , 2007 , constipation it increase morbidity and mortality in critically ill patients)

Diarrhea in critically ill patients can be due to various factors like drugs , antibiotic, enteral feeding , infection due to(clostridium difficile), and physiological factors associated with stress .

Diarrhea in intensive care patient can be crucial as it causes fluids and electrolyte imbalances , resulting in hemodynamic instability , delayed wound healing processes , impaired skin integrity and malnutrition. (critical care medicine, vol, 35, no,14, pp,2861-2862)

1.2 Justification of this study:

Gastrointestinal motility disturbances are common in critically ill patients abnormalities in gastric emptying and diarrhoea are well studied and have a considerable impact in critically ill patients' progress.

There are no set guidelines nationally recognised for the management of the bowel, but most institutions have a bowel protocol in order to facilitate and promote the bowel function of these patients.

Regular assessment of bowel function and management of bowel care elimination have shown to improve patients' outcomes.

1.3 objectives:

General objective:-

- To study awareness of the nurses working in intensive care unit
- Regarding the bowel care used for critically ill patients .

Specific objective:

- to assess nurses level of knowledge regarding bowel protocol

Chapter two

Literature review

2.1 Literature review

2.1.1 Search Strategy

A search of the literature was performed using the databases Cumulative Index of Nursing and Allied Health Literature (CINAHL), PubMed, Medline, OVID, SCOPUS, Joanna Briggs Library and Cochrane Library. For searching articles in PubMed, Medical Subject Headings (MeSH) terms were used guided by the logic grid below:

Bowel care Bowel care* Bowel management Bowel protocol Critically ill patients Intensive care patients Mechanically ventilated patients Nursing Nurses ICU nurses Nurs*Constipation Diarrhoea Laxatives Faecal incontinence ICU patients* Acutely ill patients

Boolean phrases were selected in the search options like ‘AND’ ‘OR’. For example, (Bowel management OR Bowel care OR Bowel protocol OR Constipation OR Diarrhoea OR Faecal incontinence OR Laxatives OR Bowel care*)

AND

(Intensive care unit OR Critically ill patients OR ICU patients* OR Mechanically ventilated patients OR Acutely ill patients)

AND

(Nursing OR Nurse OR ICU nurses OR Nurs*)

The three sets of terms were copied and pasted into the three ‘Advanced Search’ boxes and then the search was performed.

Selection of the literature was performed based on the dates the articles were published.

Articles written in English and published within the past 10 years (2003 to 2013) were taken

into consideration. Only peer reviewed articles relevant to this topic were selected. In order to appreciate the importance of bowel management, it is necessary to have an understanding of the anatomy and mechanisms

involved in normal bowel function, the acuity of patients admitted to the ICU, the importance of proper bowel management in these patients and how it impacts on the different patient population groups in the Intensive Care Unit (ICU) when these functions are interrupted.

The gastrointestinal tract

In human beings, the gastrointestinal tract is a hollow tube that extends from the mouth to the anus and is approximately five metres long. It is divided into two sections consisting of the upper and the lower gastrointestinal tract + The upper

gastrointestinal tract includes the esophagus, stomach and duodenum and the major function is food processing. The lower gastrointestinal tract consists of the small and large intestine. The function of this tract is to process and absorb the nutrients.

The Bowel

The terminology used for the intestine is bowel or gut (Smith, Duell & Martin 2008). Anatomy

The bowel is a tube like hollow structure that extends from the stomach to the anus (McFerran 2004). The small intestine is composed of the duodenum, jejunum and ileum (Smith, Duell & Martin 2008). The large intestine is composed of the caecum, colon and rectum (Smith, Duell & Martin 2008). The caecum includes the ileo-caecal valve and the appendix (Smith, Duell & Martin 2008). The colon is divided into ascending, transverse, descending and sigmoid (Smith, Duell & Martin 2008). The distal end of rectum, called the anal canal, contains the internal and external sphincter muscles.

Physiology of the bowel:-

The longitudinal and circular muscles along with the peristaltic activity help to mechanically churn the food bolus (Urden, Stacy & Lough 2010). The muscular sphincters and valve slocated at strategic points through

the intestinal tract prevent reflux of contents. The peristaltic waves along with rhythmic segmentation allow maximum contact between the food and the bowel wall initiating chemical reactions resulting in digestion and absorption. Functions of the bowel.

The four major functions of the bowel include digestion, absorption, storage and excretion (Urden, Stacy & Lough 2010).

The process of digestion takes place by breaking down the large molecules into smaller ones which enhance intestinal absorption (Fulbrook & Grealy 2007; Smith, Duell & Martin 2008). The bowel absorbs the nutrients from the food into the body (Fulbrook & Grealy 2007; Smith, Duell & Martin 2008).

The waste products are stored in the bowel until they are emptied from the body in the form of feces or stool (Smith, Duell & Martin 2008). The act of defecation is that the waste products are emptied and excreted from the digestive tract via the bowel (Smith, Duell & Martin 2008). This process is a result of controlled and uncontrolled series of complex physiological processes. The pattern of defecation varies from person to person and can occur from several times each day to two to three times a week (Hurnauth 2011).

Acuity of patients in ICU:

Patients are admitted to the intensive care unit (ICU) in order to be treated for their serious to life threatening conditions. These patients encompass different background in terms of their age, past medical history, current health status, reason for admission and the severity of their illness. In order to standardize the physiological variables, predictive scoring systems are used. These systems measure the severity of disease and the prognosis of patients in the ICU. At the same time, these systems help in clinical decision making – to predict outcome, cost-benefit analysis, withdrawal of treatment, to monitor and assess the

effectiveness of new therapies; population sample comparison in research studies and for the comparison between different ICU . One of the most popular acuity scoring systems in the intensive care unit is Acute Physiology and Chronic Health Evaluation (APACHE) version II (Bouch & Thompson 2008; Miller et al. 2011).

APACHE II was revised by Knaus et al. (1985) and has four main components – acute

physiology score, chronic health evaluation, age of patient and urgency of admission to the ICU. The acute physiology score is based on twelve physiological variables – ‘temperature, mean arterial pressure, heart rate, respiratory rate, oxygenation, arterial pH, serum sodium, serum potassium, serum creatinine, haematocrit, white blood cell count and Glasgow Coma Score’ (Celinski & Jonas 2004, p. 95). Each of the variables attracts points depending on the range outside the normal values. The measurement is carried out during the first 24 hours of admission to the ICU. The higher the score the higher the risk of hospital death (Hashem et al. 2008).

Patient Population in ICU:

The patients in the ICU suffer from various conditions and are treated differently based on their presenting complaints and physiologic abnormalities. Patients admitted to ICUs are 9iarrhea9on critically ill patients such as shocked patients, septic, trauma, post-surgical recovery, single or multi-organ failure and poisoning (Department of Health 2013). They also include patients with spinal injury and elderly patients. Patients from each of these categories face different problems regarding their bowel functioning.

Critically ill patients:

Patients in the intensive care unit are generally critically ill, hemodynamically unstable and have multiple organ dysfunction (Li, Wang & Ma 2012). They are supported by various

Life saving high technology machines such as ventilators, renal dialysis units, pacemakers; medications and other major high risk procedures. Treatment is based on the presenting signs and symptoms, and may involve complex activities like assisting patients to breathe and ventilate via mechanical ventilation, administration of inotropes to improve the blood pressure and contraction of the heart, replacement of electrolytes and the use of renal replacement therapies such as dialysis (Asai 2007; Ritchie et al. 2008).

Subsequently, bowel management can often be overlooked (Ritchie et al. 2008). Stroud (2007) describes how acute illness increases the metabolic rate and impairs the absorption of nutritional substrates thus exacerbating the patient's poor nutritional status.

Critically ill patients often have a decreased oral food intake before the ICU admission due to decreased appetite, gastrointestinal symptoms, anxiety, or other medical and surgical factors. In addition, restricted dietary intake secondary to 'nil by mouth' status for different diagnostic and therapeutic procedures or the non-commencement of nasogastric feed exacerbates the problem (Singer et al. 2009). Good bowel care improves patient comfort and helps in reducing nausea and vomiting (Fulbrook & Grealy 2007).

The frequent use of specific drugs such as corticosteroids and neuromuscular blockade to treat critically ill patients increases skeletal-muscle breakdown and wasting (Singer et al. 2009). Diuretics cause increased urinary loss of electrolytes, water-soluble vitamins and minerals. The side effects of antibiotics to treat infection and the use of

opioids and analgesia for pain and discomfort can affect the bowel, leading to either constipation or diarrhea (Brock et al. 2012). Vasopressor therapy such as use of inotropes and vasopressors to increase blood pressure reduces blood flow to the splanchnic system and can cause stress ulcers, ileus, malabsorption and bowel infarction in hypotensive and shock patients (Hollenberg 2011). Patients in the intensive care setting generally have limited mobility or no mobility at all, reducing gut motility.

Despite bowel care being one of the essential aspects of nursing care of intensive care patients, it appears that much of the time it is neglected as the focus is primarily on the haemodynamic stability of the patients. It has been reported that bowel assessment is inadequately performed due to its low priority in the workload of the nurses working in the intensive care unit (Bayliss & Salter 2004). Nursing interventions for bowel care are based mostly on routines and practices in critical care setting and there is very little research evidence to support efficient bowel care (Rogers 2008). Importance of bowel care in ICU patients.

Worsening APACHE scores and failure of one or more organ in the critically ill patients often leads to the improper functioning of other organs, one of which is the bowel.

The role of bowel care varies according to the different population groups in the ICU. Patients are sedated, paralysed, immobile and malnourished secondary to the treatment given in the ICU.

To improve the nutritional status they are usually fed via nasogastric or enteric tubes (Griffiths & Bongers 2005). The normal mechanism of digestion is affected and results in a negative effect causing further bowel problems.

The non-functioning of the bowel can also be due to paralytic ileus, bowel surgery and gastro-intestinal abnormalities (Kattoda 2013, pers.

12iarr. 12 January).Common problems faced by the intensive care patients Critically ill patients often experience bowel problems secondary to the physiological processes, therapeutic and pharmacological measures used during the critical phase of their life. Constipation and diarrhoea are the most common and present major problems for intensive care patients. At the same time, critically ill patients may also confront faecal incontinence and non-defecation despite the administration of enteral nutrition, prokinetics and laxatives (Bishop et al. 2010).Constipation

One of the most common problems facing the patients in the intensive care unit is constipation. Constipation may be defined as a decrease or absence of bowel movement for days, where the dry and hard stool is usually very painful or difficult to expel (Fulbrook &Grealay 2007).

Immobility is one of the causes of constipation in critically ill patients. Patients in the intensive care are generally bed-ridden due to their unconscious state, haemodynamicinstability, dependence on medications controlling their blood pressure and heart rate, attachment of various monitoring lines and cables and decreased muscle power and strength due to sedatives and analgesics. Nursing patients in supine position also nullifies the impact of gravity on faecal evacuation (Bishop et al. 2010). Regular and timely positioning of the patients is encouraged for critically ill patients.

During the period of critical illness there is an increase in the capillary permeability with the leakage of albumin to the extravascular space and with alterations in the electrolytes, there is thus an increased retention of salt and water causing dehydration in these patients. (Cereda et al. 2010). A cautious correction of the fluid imbalances is necessary. Effects of constipation in the critically ill

patients. Constipation can cause various effects on the respiratory, cardiovascular, gastrointestinal and neurological systems of the body. The effects of constipation in critically ill patients are inter-related. The signs and symptoms affecting the gastrointestinal system are abdominal distension, nausea, vomiting and feed intolerance. Abdominal distension affects the normal respiratory mechanism by splinting the diaphragm which prevents inadequate expansion of the lungs, increasing the respiratory rate resulting in ineffective gas exchange. Decreased oxygen supply to the cardiovascular system results in tachycardia (increased heart rate) and hypertension (increased blood pressure). Constipation also affects the neurological status causing restlessness, agitation and confusion (Masri, Abubaker & Ahmed 2012; Mostafa et al. 2003). Studies have found that constipation may result in failure to wean from mechanical ventilation, prolonged ICU stay and increased mortality (Mostafa et al. 2003; van der Spoel et al. 2007). The incidence of constipation in intensive care patients is reported to be between 16% and 83% (McPeake, Gilmour & MacIntosh 2011).

Diarrhoea:

Diarrhoea is quite commonly seen in critically ill patients and often affects the fluid and electrolyte balance in the patients leading to the deterioration in their physical condition (Wiesen, Gossum & Preiser 2006). There is no general consensus of diarrhoea definition is used in the clinical setting (Lebak et al. 2003; Martin 2007; Sabol & Carlson 2007; Whelan, Judd & Taylor 2003). Definitions of diarrhoea currently used are based on the frequency, consistency, weight and volume of the stool (Wiesen, Gossum & Preiser 2006).

According to Wiesen, Gossum and Preiser (2006, p. 149), diarrhea is defined as ‘... having three or more loose or liquid stools per day with a stool weight greater than 200-250 ml per day’.

Diarrhoea in critically ill patients can be due to various factors like drugs, antibiotics, enteral feeding, infection due to clostridium difficile and physiological factors associated with stress (Mc Peake, Gilmour & Macintosh 2011). The co-morbidities, severity of illness and diagnosis can also be contributing factors for diarrhea in the critically ill patients. Conclusion.

This chapter provided a brief description of the anatomy, physiology and functions of the gastrointestinal tract as an aid to understanding the normal functioning of the bowel. An explanation of the acuity of patients and the population groups admitted to the ICU, importance of bowel care and the common problems faced by these groups with a detailed description on the studies conducted on bowel protocols is discussed. The literature review identified a gap in the literature and focused on the aspect of the background information the nurses should be aware of in regards to the existence, importance, need and regularity of bowel protocol in the Intensive Care Unit.

Chapter three

Methodology

3.1 Study design:

This was descriptive cross sectional hospital based study to investigation awareness in ICU in military hospital.

3.2 Study area :

this study was conducted in Khartoum state in(Omdurman city).Khartoum state it'sone of the eighteen state of the sudan although it is the smallest state by area (22.142) Km2 it is the most population .

Intensive care unit composed 45 bed

3.3 study period :

This study will be conduct form ICU in military hospital form october2017to February (2017-2018).

3.4 Study population:

Involved in this study were nurses working in ICU in military hospital during study period.

3.5 Inclusion:

- Nurses of different level working in the ICU for more than three month .
- The nurses who provided direct nursing care to the critically ill patient were included

3.6 Exclusion:

- Nurses managemen
- Student nurse

3.7 Sampling technique:

The study will include convenience sampling as the study is based on the nurses working in the intensive care unit.

3.8 Sample size:

all number of nurses included in this study.(35)

3.9 Data collection :

Will asked closed questions during interview

3.10 Tool of data collection :

Data will be collected by an online survey ,the questionnaire will include open and closed end question

3.11 Data analysis

This will be conducted by use of statistical package for social sciences (SPSS) system.

3.12 Ethical consideration

- Ethical approval from university of shandi
- Ethical approval from scientific research board in the ministry of health .
- Permission from hospital take from hospital director
- Informed consent obtained from all participate, after explanation objectives and out com of the study .

Chapter four

Results

Age:

Table (4.1) age disruptions of participants (n=35)

	Frequency	Percent
20-30yrs	24	68.6
30-40 yrs	11	31.4
Total	35	100%

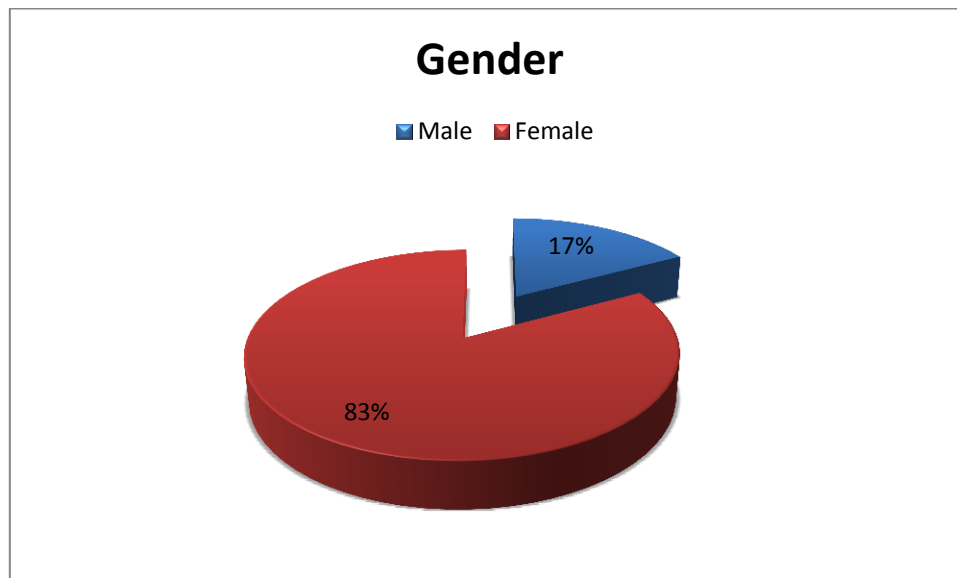


Figure (4.1) sex disruptions of participants (n=35)

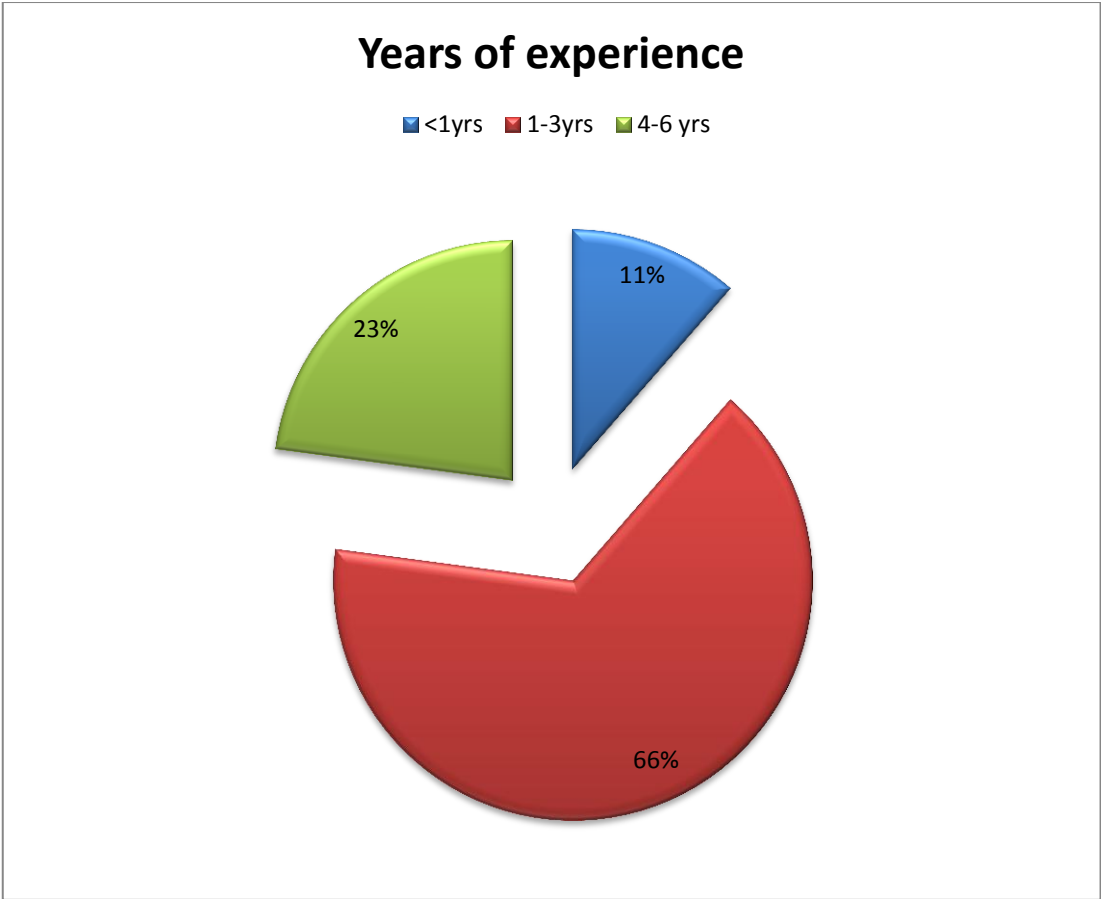


Figure (4.2) years of experience disruption of participant (n=35)

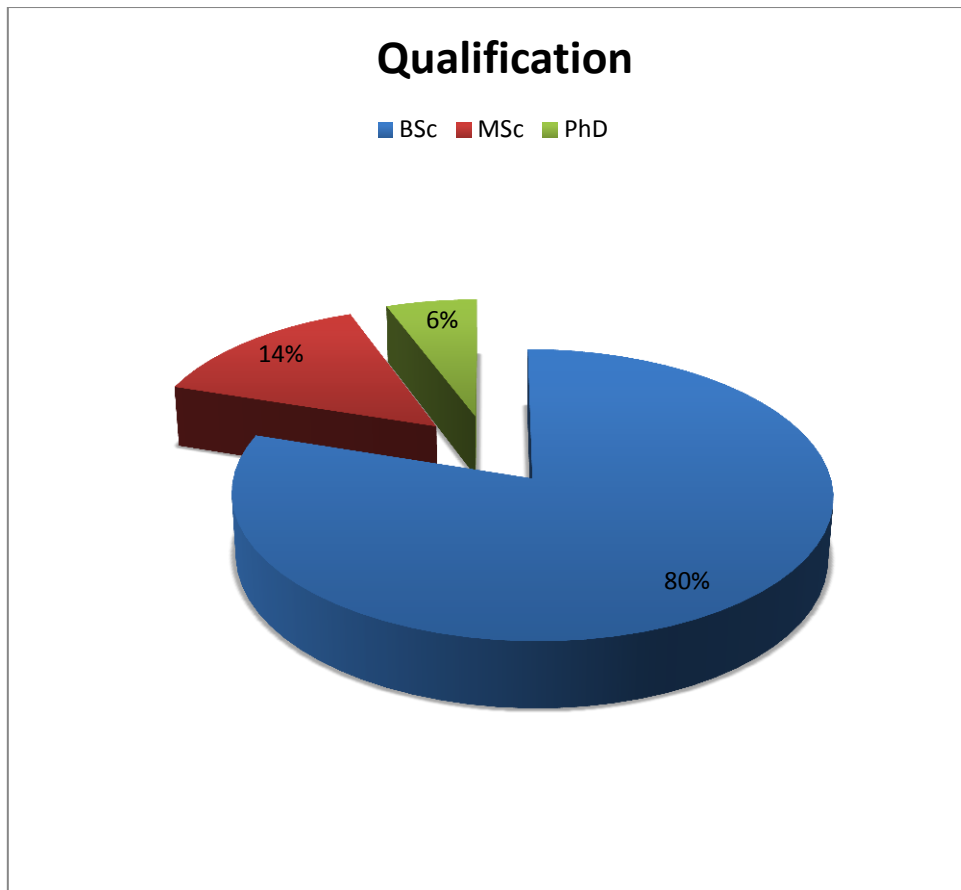


Figure (4.3) qualification disruptions of participants (n=50)



Figure (4.4)training course (n=50)

Table (4.2) study population job classification

	Frequency	Percent
Registered nurse-level 1	10	28.6
Registered nurse-level 2	24	68.6
National service	1	2.9
Consultant nurse	0	0
Total	35	100%

Table (4.3) Qualification related to the critically ill courses

	Frequency	Percent
Critical care certificate (hospital\ university)	10	28.6
Graduate diploma	6	17.1
Master of nursing(ICU critical care)	3	8.6
Non	16	45.7
Total	35	100%

Table (4.4) Level of awareness of ICU nurses about bowel protocol

	Frequency	Percent
A ware	10	28.6
Some aware	24	68.6
Not aware	1	2.9
Total	35	100%

Table (4.5) study group comment about efficiency of bowel protocol application.

	Frequency	Percent
Effective	9	25.7
Need modification	24	68.6
Not effective	2	5.7
Total	35	100%

Table (4.6) Sources of information regarding the bowel protocol located in ICU

	Frequency	Percent
References recorded in ICU	5	14.3
Personal experience	13	37.1
Text book	2	5.7
Internet recourse	15	42.9
Total	35	100%

Table (4.7) study group action when experiencing problems with the bowel protocol

	Frequency	Percent
Team leader	13	37.1
Case manger	3	8.6
ICU doctor	12	34.3
Seiner staff	7	20.0
Total	35	100%

Table (4.8)study group comment about problems occur if an ICU patient's bowel care is not managed properly

	Frequency	Percent
GIT problems	8	22.9
Nutritional problems	3	8.6
Respiratory problems	2	5.7
General problems	20	57.1
1&4	2	5.7
Total	35	100%

Table (4.9)study group comment about importance of bowel management progress of ICU patients

	Frequency	Percent
Very important	6	17.1
Important	26	74.3
Unimportant	1	2.9
Very unimportant	2	5.7
Total	35	100%

Table (4.10) study group level of knowledge about indication of bowel protocol for ICU patients.

	Frequency	Percent
On admission	9	25.7
As soon as practical after admission	10	28.6
Within first 24 hours of admission to ICU	12	34.3
24-48 hours of the admission ICU	4	11.4
Total	35	100%

Table (4.11) study group comment about decision of using bowel protocol for ICU patients

	Frequency	Percent
ICU doctor	14	40.0
Patient care nurse	9	25.7
Team leader	11	31.4
Case manger	1	2.9
Total	35	100%

Table (4.12) level of agreement of following statement bowel protocol in ICU

	Frequency	Percent
Strongly disagree	1	2.9
Disagree	2	5.7
Agree	30	85.7
Strongly agree	2	5.7
Total	35	100%

Table (4.13) level of agreement of implementation of bowel protocol in ICU

	Frequency	Percent
Strongly disagree	0	0
Disagree	5	14.3
Agree	28	80.0
Strongly agree	2	5.7
Total	35	100%

Table (4.14) barriers to implementation of bowel protocol for patients in ICU by study group

	Frequency	Percent
Attitude of nurse	4	11.4
Lack of awareness	10	28.6
Lack of education	4	11.4
Lack of understanding	8	22.9
Lack of accountability	1	2.9
Lack of responsibility	3	8.6

Table (4.15) study group comment about efficiency o bowel protocol implementation

	Frequency	Percent
Education and awareness	18	51.4
Documentation	11	31.4
Staff supervision	4	11.4
Proactive patient care nurse	2	5.7
Total	35	100%

CHAPTER FIVE

*Discussion, Recommendations,
Conclusion*

5.1 Discussion

The bowel management protocol is used for the patients admitted to ICU to promote recovery .maintain normal functions of the gastrointestinal system and prevent complications in critically ill patient .the literature review highlighted the important of bowel management in critically ill patient but is often overlooked and ignored .

There is no study based on the reasons for non compliance and the nurses.

A questionnaire was formulated to assess the awareness and attitude of nurse working in the intensive care regarding the bowel protocol used in the critically ill patient.

Specifically, the aim of this study was to answer the question ‘Are nurses working in the ICU aware of a bowel protocol available in their working environment and what their attitude are consuming this protocol?’

Bowel management in critically ill patients. However the study highlighted a reluctance to implement the Bowel Protocol, and did suggest methods to ensure effective implementation.

Even though the majority of nurses are aware of the protocol, there was some diversity regarding the location and source of information. The results indicated that all the nurses involved in the study agreed that bowel management was very important for critically ill patients. The majority indicated that the Bowel Protocol should be commenced as Within first 24 hours of admission to ICU . Although the results show that the team leader and the doctor were the people who should be approached if the patient experienced bowel problems.

Constipation was one of the most common problems mentioned in the questionnaire if the bowel was not managed properly. The effects of constipation results in abdominal distension and pain, failure to wean from mechanical ventilation, prolonged ICU stay and increased mortality

Diarrhea is the other common problem seen in critically ill patients. It can cause fluid and electrolyte imbalances. Malnourishment and skin excoriation in critically ill patients .

All problems are interrelated to each other and one affects other .

Even though the nurses were aware of the protocol that is currently used in their area, the findings of this study have raised some concerns relating to the attitudes of the nurses, and accountability and responsibility.

The reluctance to implementing the bowel protocol were due to Lack of confidence and Staff attitude , inadequate knowledge and awareness .

The bowel protocol would benefit the patient in the long run. Use of education

Along with the Bowel Protocol would benefit the nurses' knowledge and awareness

5.2 Conclusion:

- The restatement of the problem and description of the procedures are summarized briefly. In this chapter ,intensive care nurses' awareness towards the Bowel Protocol in critically ill .This study there is a need for further education regarding the importance of bowel management in critically ill patients. Also nurses need to be accountable for their actions.
- This study has major implications for the overall management and provision of holistic care to the critically ill patients. Some nursing staff were good in applied the instruction.

6.3 Recommendations for future study are as follows:

- To Research should be conducted to investigate this problem further with an observational method to observe actual practice relating to bowel care and add clarity to the barriers impacting on implementation of the bowel protocol.

- To repeat this study after a period of time to assess any increase in the level of knowledge and any improvement in attitude, accountability and responsibility after making the results of this study known to the participants.
- To encourage nurses to attend in-service education and regular updates with further study could include comparisons of the attitudes and awareness of nurses working in other public and private hospitals and audit the actual compliance.
- To putted boosters on billboard on ICU of newspapers and assess awareness

Reference:

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Appendix

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

University of Shendi
Faculty of postgraduate studies
Master of Critical Care of Nursing

Awareness of intensive care nurses regarding the bowel care protocol
for the critically ill patients in Omdurman Military Hospital
(2018)

Demographic data

1. Age :- 20-30yrs 30-40 yrs > 40yrs
2. Gender:- male female
3. Years of experience :- <1yrs 1-3yrs 4-6 yrs
4. Qualification :- Diploma BSc MSc PhD
5. Training course :- never once-twice three or more

1. please indicate your level of employment:

1. Registered nurse-level 1
2. Registered nurse-level 2
3. National service
4. Consultant nurse

2. Do you have a specific qualification related to the critically ill?

1. Critical care certificate (hospital\ university)
2. Graduate diploma
3. Master of nursing(ICU critical care)
4. Non

3. How long have your worked in ICU? (in years\months)

1. Less than years
2. 1-3years
3. 4years and more

4. Are you aware of the ICU bowel protocol?

- 1. A ware
- 2. Some aware
- 3. Not aware

5. How did you find out about the bowel protocol?

- 1. Effective
- 2. Need modification
- 3. Not effective

6. Where is the information regarding the bowel protocol located in ICU?

- 1. References recorded in ICU
- 2. Personal experience
- 3. Text book
- 4. Internet recourse

7. Who do you speaks to if your patients are experiencing problems with the bowel protocol?

- 1. Team leader
- 2. Case manger
- 3. ICU doctor
- 4. Seiner staff

8. Please comment on problems that may occur if an ICU patient's bowel care is not managed properly?

- 1. GIT problems
- 2. Nutritional problems
- 3. Respiratory problems
- 4. General problems

9. How improve is good bowel management to the progress of ICU patients?

- 1. Very important
- 2. Important
- 3. Unimportant
- 4. Very unimportant

10. When should the bowel protocol be commended for patients admitted to ICU?

- 1. On admission
- 2. As soon as practical after admission
- 3. Within first 24 hours of admission to ICU
- 4. 24-48 hours of the admission ICU

11. Who should make the decision regarding the commencement of the bowel protocol for patients admitted ICU?

- 1. ICU doctor
- 2. Patient care nurse
- 3. Team leader
- 4. Case manger

12. Indicate your level of agreement with the following statement .the bowel protocol in ICU is easy to understand.

- 1. Strongly agree
- 2. Agree
- 3. Disagree
- 4. Strongly disagree

13. indicate your level of agreement with the following statement, the bowel protocol in ICU is easy to implement.

- 1. Strongly agree
- 2. Agree
- 3. Disagree
- 4. Strongly disagree

14. in your experience, what are the barriers to implementation of the bowel protocol for patients in ICU? (Please comment)?

- 1. Attitude of nurse
- 2. Lack of awareness
- 3. Lack of education
- 4. Lack of understanding
- 5. Lack of accountability
- 6. Lack of responsibility

15 .How do you think that the bowel protocol could be implemented more effectively in your unit?

- 1. Education and awareness
- 2. Documentation
- 3. Staff supervision
- 4. Proactive patient care nurse