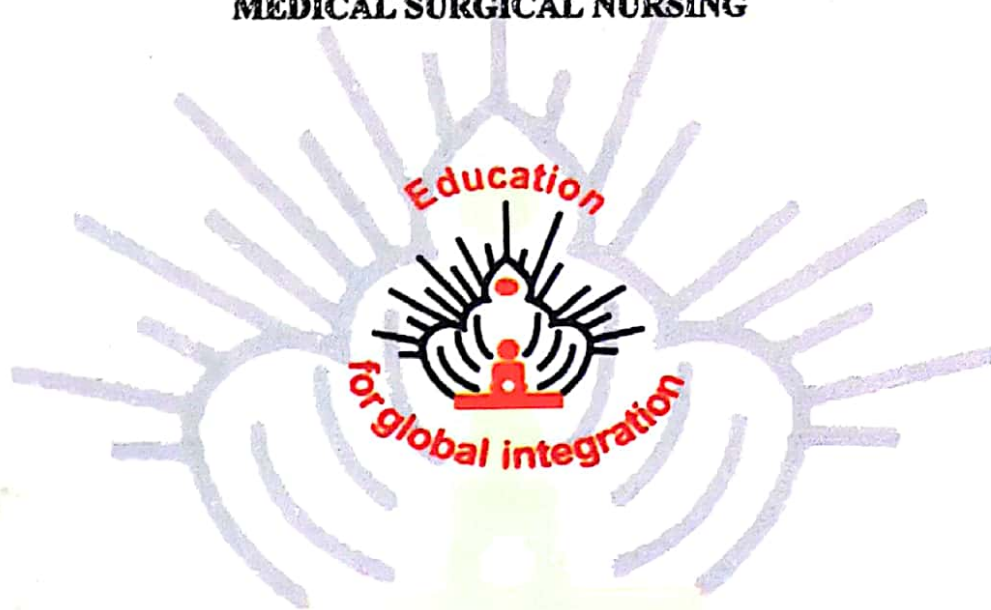


**A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE OF
MODERN WOUND CARE DRESSING MANAGEMENT
AMONG NURSES IN SURGICAL WARD 4
AL SABAH HOSPITAL KUWAIT**

**DISSERTATION SUBMITTED TO THE MIDDLE EAST UNIVERSITY
FZE IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR
THE AWARD OF DEGREE OF M.Sc. (NURSING)
MEDICAL SURGICAL NURSING**



BY

AGUNG SETIYADI

**MIDDLE EAST UNIVERSITY FZE
SEPTEMBER 2016**

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SEPTEMBER 2016



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CERTIFICATE

This is to certify that the work title, “A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE OF MODERN WOUND CARE DRESSING MANAGEMENT AMONG NURSES IN SURGICAL WARD 4 AL SABAH HOSPITAL KUWAIT ”, is bona fide work done by AGUNG SETIYADI at Middle East University FZE Kuwait, towards the partial fulfillment of the University rules and regulations for the award of Degree of M.Sc. (Nursing) – Medical Surgical Nursing, (Branch-1) during the academic period : 2014 – 2016.

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AGUNG SETIYADI

ABSTRACT

AUTHOR : AGUNG SETIYADI

**KEYWORDS: knowledge, attitude, modern dressing, modern
wound care management**

TITLE

A Study To Assess The Knowledge And Attitude Of Modern Wound Care Dressing Management Among Nurses In Surgical Ward 4 Al Sabah Hospital Kuwait.

OBJECTIVES

1. To assess the knowledge regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait
2. To assess the attitude regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait
3. To correlate the knowledge and attitude regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.
4. To find out the association between the knowledge regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait with their demographic variables.

METHODS

The research approach adopted for the study was survey approach. The descriptive correlational design was used to explore the nurses' attitude and knowledge regarding modern wound care dressing management among nurses in

surgical ward 4 Al Sabah Hospital Kuwait. In addition, the relationships among nurses' attitudes and knowledge were examined. A total of 30 nurses of Al Sabah Hospital Kuwait were selected by using convenience sampling technique and the nurses were assigned in one group.

RESULTS

The descriptive and inferential statistics were used to compute the data. The statistics showed the following results:

The result shows that 27(90 %) nurses had favourable attitude and 3(10 %) had moderate favourable attitude about modern wound care dressing management. And shows that 24(80%) nurses had moderate knowledge and 3(10 %) had poor knowlegde about modern wound care dressing management. And only 3(10%) nurses had good level knowledge about modern wound care dressing management.

The statistic result shows that Correlation Spearman Test score for correlation of the knowledge and attitude variable was 0.067 ($P > 0.05$) which revealed that the level of attitude and knowledge has no significant. There is no correlation the knowledge and attitude regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.

INTERPRETATION AND CONCLUSION

The level of nurses' knowledge was at moderate level regarding modern wound care dressing management and the level of nurses' attitude was at favourable. All sub-dimensions of attitude were at favourable attitude. The result of this study is no correlation existed between nurses knowledge and attitude.

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LIST OF ABBREVIATIONS

AHCPR	Agency for Healthcare Policy and Research
EPUAP	European Pressure Ulcer Advisory Panel
NHS	National Health Service
BSN	Bachelor of Science in Nursing
MSN	Master of Science in Nursing

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KEYWORDS : **knowledge, attitude, modern dressing,
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CHAPTER I

INTRODUCTION

“Too often we underestimate the power of a touch, a smile, a kind word, a listening ear, an honest compliment, or the smallest act of caring, all of which have the potential to turn a life around.”

LEO F. BUSCAGLIA QUOTES

BACKGROUND

Skin wounds are typically divided into acute and chronic wounds. Acute wounds are traumatic or surgical wounds that usually heal over time according to the normal wound-healing process. Acute skin wounds vary from superficial scratches to deep wounds with variable amounts of tissue loss and damage to blood vessels, nerves, muscles or other tissues, or internal organs. These wounds may also be due to vascular insufficiency, complications of diabetes, skin damage due to pressure and postoperative complications.

Acute wound healing is a complex physiological process that is regulated by many different cell types, growth factors, cytokines, and chemokines. Most of all, it is the body's inherent way of responding to injury for survival. Skin wounds and compromised

wound healing are major concerns for the public health sector. Complex and lengthy treatments cause an increasing burden on healthcare expenses. Choosing the right wound care dressing management to suit the conditions of a patient's wound is vital for optimum healing and quality of life.

Knowledge is a familiarity, awareness or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Attitude is an internal or covert feeling and emotion or selective nature of intended behavior which represents the affective domain. Certain knowledge can influence upon individuals ability to perform actions. The attitude affects individual towards practice. Knowledge and attitude bring changes in human behavior. Therefore, integral components of knowledge and attitude represent the quality of nursing practice.

NEED FOR THE STUDY

Wounds are injury to living tissue caused by a cut, blow, or other impact, typically one in which the skin is cut or broken. Appropriate wound care dressing management is important for wound healing development.

Sen (2009) has found in his study that the United States alone, 6.5 million patients need treatment for chronic wounds and an estimated US\$25 billion is spent annually.

Armstrong (2001) in his studies showed that chronic wound created several adverse effects, such as increased risk of infection, delayed wound healing, increased mortality, increased use of hospital resources and patient care costs, increased patients' length of hospital stay, pain and suffering, and lower quality of life.

Ayello & Meaney (2003) found that nurses' knowledge, attitude, and practice are viewed as extrinsic factors for wound formation. Poor or inadequate knowledge and practice, and negative attitudes of nurses influenced higher of wound healing process.

In surgical ward 4 Al Sabah Hospital of Kuwait, there is very limited information available about modern wound care dressing management used by the nurses. Currently, there is no evidence on nurses' knowledge, attitude, and practice regarding modern wound care dressing management and this study was the first of its kind. Therefore, it was important to explore and investigate the nurses' knowledge, attitude, and practice regarding modern wound care dressing management for hospitalized patients in surgical ward 4 Al Sabah Hospital of Kuwait.

STATEMENT OF PROBLEM

A Study to assess the knowledge and attitude of modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.

OBJECTIVES OF THE STUDY

The objectives of this study were as follows:

1. To assess the knowledge regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait
2. To assess the attitude regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait
3. To correlate the knowledge and attitude regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.
4. To find out the association between the knowledge regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait with their demographic variables.

HYPOTHESIS

1. Nurses in Surgical Ward 4 Al Sabah Hospital Kuwait have adequate knowledge regarding modern wound care dressing management
2. Nurses in Surgical Ward 4 Al Sabah Hospital Kuwait are aware of proper attitude of modern wound care dressing management.

3. There is correlation the knowledge and attitude regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.
4. Nurses in Surgical Ward 4 Al Sabah Hospital Kuwait will vary in modern wound care dressing management practice according to socio cultural factors.

OPERATIONAL DEFINITIONS

1. Knowledge

Includes aspects of becoming familiar with the body of information, facts and principles gained by scientific development and gaining the understanding in the course of experience. It refers to correct response of the nurses in Surgical Ward 4 Al Sabah Hospital Kuwait regarding modern wound care dressing management which is measured by structured questionnaire.

2. Attitude

Is described as a mental position that one stands on about a fact or state and feelings and emotion can be involved. In this study it refers to the attitude of wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait which is measured by 3 point likert scale.

3. Modern Wound Care Dressing Management

Modern modern wound care dressing management is defined as the provision of the appropriate environment for healing by both direct and indirect methods together with the prevention of skin breakdown.

4. Nurses

Nurses is a licensed health-care professional who practices independently or is supervised by a physician, surgeon, or dentist and who is skilled in promoting and maintaining health. In this study it refers to nurse which taking care of the patient that admitted in Surgical Ward 4 Al Sabah Hospital Kuwait.

ASSUMPTIONS

1. Nurses in Surgical Ward 4 Al Sabah Hospital Kuwait have inadequate knowledge regarding modern wound care dressing management
2. Nurses in Surgical Ward 4 Al Sabah Hospital Kuwait are not aware of proper techniques of modern wound care dressing management.

DELIMITATIONS

1. Sample size is limited to 30
2. The study is limited to the nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.

PROJECTED OUTCOME

1. This study helps to assess the knowledge and attitude about modern wound care dressing management of the nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.
2. This study will help the nurses in Surgical Ward 4 Al Sabah Hospital Kuwait to analyse the importance of modern wound care dressing management and its techniques.
3. It helps to improve the level of knowledge and attitude of modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.
4. This study will therefore help us know the weakness on wound care knowledge thereby giving information on what nurses in Surgical Ward 4 Al Sabah Hospital Kuwait need to strengthen.
5. This will help reduce the possibility of infection and in due course this study will improve the attitude, knowledge and practices of patients and nurses in Surgical Ward 4 Al Sabah Hospital Kuwait towards overall wound care.

SCOPE OF THE STUDY

This study was focused on exploring the nurses' knowledge and attitude regarding modern wound care management. In addition, the relationships among nurses' knowledge and attitude were examined. The subjects involved in this study were all nurses

who were working permanently at surgical ward 4 of Al Sabah Hospital in Kuwait. This study was conducted from July to August 2016.

CONCEPTED FRAMEWORK

The conceptual framework of this study was based on taxonomy of educational objectives developed by Bloom (1956) and modified by Anderson and Krathwohl (2001). In addition, the knowledge - attitude - practice (KAP) model and the literature reviews of modern wound care dressing management were used to guide the relationship between knowledge, attitude, and practice and to develop contents of wound care dressing management. Bloom's Taxonomy of learning objectives was selected to guide this present study because the researcher would like to examine whether nurses had been trained to achieve learning outcomes, which is needed to enhance the healing process of the wound development by modern wound care dressing management. Three domains of learning objective are classified: cognitive, affective, and psychomotor. Knowledge, attitude, and practice represent those three domains respectively. Cognitive domain has two dimensions: knowledge and cognitive process.

According to Bloom (1956), the first level is the prerequisite to the next. It means that one cannot effectively address the higher level if they do not learn the below ones. In addition, in the context

of Kuwait, nurses have been trained to perform task oriented nursing actions, which require at least the first three levels of knowledge, attitude, and practice skills. It is then more reasonable to assess them whether nurses process the first three levels in the learning domains. Therefore, in this study, knowledge, attitude, and practice were the key concepts representing nurses' development of quality of care to do modern wound care dressing management. According to Launiala (2009) about the KAP Model, there are interrelations among knowledge, attitude, and practice. Certain knowledge can influence upon individuals ability to perform actions. The attitude affects individual towards practice. Knowledge and attitude bring changes in human behavior. Therefore, integral components of knowledge, attitude, and practice represent the quality of nursing practice.

CHAPTER II

LITERATURE REVIEW

Review of literature is an essential step in the research project. It provides basis for future investigation, justifies the need for study, throws light on the feasibility of the study, Reveals constrains of data collection and relates the findings from the study to another with a hope to establish a comprehensive study of scientific knowledge in a professional discipline, from which valid theories developed.

Review of Literature categorized under following Headings:

1. Literatures related to modern dressing wound care management
2. Literatures related to nurses' knowledge and attitude

Kadam & Shinde (2014) conducted effectiveness of structured education on caregiver's knowledge and attitude regarding colostomy care. Experimental approach with one group pre test post test design was used for 30 caregivers and convenient sampling technique was used. Majority 36.66 % of caregivers belonged to the age group of 31-40 years, and 66.67% were females and 33.33% with. 86.67% participated in this study were Married. The knowledge score gained by the respondents in the results shows that the mean value of knowledge in pre test was 7.43 and

at post assessment was 13.77 since the “P” value for the test is less than 0.05. The findings showed that in pre test, attitude score the maximum, 66.670/0 of the samples got the score between 61-80 (positive attitude), in post test attitude score, the maximum, 700/0 of the samples got the score 81& above (strongly positive attitude), there was significant relationship with education and place of residence subjects and pre test Knowledge score regarding colostomy care of patient. Whereas there was significant relationship with education of subjects and pretest attitude score. Structured education programme was highly effective to improve the knowledge score and to improve the attitude score of subjects/ caregiver towards colostomy care of patient

Iranmanesh, Rafiei, and Ameri (2011) conducted critical care nurses' knowledge about pressure ulcer in southeast of Iran. Pressure ulcer prevention needs nurses' awareness of sore classification/onset, its item characteristics, and its prevention. Using Pieper's Pressure Ulcer Knowledge Test, 126 critical care nurses' knowledge about pressure ulcer was examined. The questionnaire was divided into three categories including: (1) sore classification/onset; (2) wound characteristics, and (3) preventive measure. The level of nurse's knowledge was insufficient. The highest rate of correct answers belonged to section 2 – prevention of pressure ulcer. Programs aimed at raising nurses' knowledge

accompanied by interventions intended to decrease incidence of pressure ulcer are important parts in educational programs. Continuing education may need to be added to the pressure ulcer care to improve the quality of care at intensive.

Demarré, Vanderwee, Defloor, Verhaeghe, Schoonhoven, and Beeckman (2011) conducted pressure ulcers: knowledge and attitude of nurses and nursing assistants in Belgian nursing homes. A cross-sectional multi-centre study was used in this study. A convenience sample of nine Belgian nursing homes, representing 18 wards was chosen in the study. In total, 145 nurses and nursing assistants were included. The compliance with the guidelines was evaluated in 615 residents, and data were collected using validated instruments. Fully compliant prevention was found in only 6.9% of the residents at risk. The mean knowledge score of the nurses was 29.3 vs. 28.7% for the nursing assistants. The overall attitude score was 74.5%, and attitude scores were significantly different between nurses and nursing assistants. Nurses showed to have a more positive attitude towards pressure ulcer prevention than nursing assistants, respectively 78.3 and 72.3%. A more positive attitude was a significant predictor of pressure ulcer prevention compliance with the guidelines provided to residents at risk of pressure ulcers in nursing homes. Knowledge about pressure ulcer prevention of both

nurses and nursing assistants in nursing homes was low. Attitudes were a significant predictor of the application of fully compliant prevention in residents at risk.

Dugdall & Watson (2009) conducted what is the relationship between nurses' attitude to evidence based practice and the selection of wound care procedures?. Survey design using a questionnaire completed by 156 qualified nurses working in three UK National Health Trusts. A statistically significant difference was seen between those nurses with a tissue viability link nurse role ($p = 0.002$) and those without a link nurse role; those educated to first degree ($p < 0.001$) and those without a first degree; and those who had received formal tissue viability training ($p < 0.001$) and those with informal tissue viability training. There was also a highly statistically significant relationship between the clinical grade of staff and the overall attitude to evidence-based practice ($p < 0.001$). Nurses who had attained a higher level academic qualification, had a tissue viability link nurse role and those who had received formal tissue viability training scored generally higher in the wound care knowledge tests and in attitude to evidence-based practice. The care received by patients in relation to wound care could be dependent upon factors that are related to the individual characteristics of the nurse providing the care and these factors, in turn, are related to education and

training with respect to wound care. Better general education and better specific training in wound care could lead to better wound care.

Källman & Suserud (2009) conducted knowledge, attitudes and practice among nursing staff concerning pressure ulcer prevention and treatment – a survey in a Swedish healthcare setting. In this cross-sectional study, a total of 230 questionnaires were distributed to an equal number of RNs and NAs in both municipality as well as hospital care settings. The response rate was 67% (n = 154). In general, all respondents displayed good knowledge on prevention and treatment of pressure ulcers and demonstrated a positive attitude towards this area of care. However, answers provided to some questions indicate that recent research findings and guidelines have not succeeded in reaching out to these occupational groups. Furthermore, only 37% (n = 55) of the participants said that they have an agreed strategy for the prevention of pressure ulcers in their unit. These shortcomings may affect the quality of care provided to the patient and lead to pressure ulcers developing as a consequence. Today, evidence-based methods for risk assessment are available but are not adopted and used in practice. The study highlights the need to further reduce the gap between research and practice.

Hecke, Grypdonck, Beele, Bacquer, and Defloor (2008)

conducted how evidence-based is venous leg ulcer care? a survey in community settings: two focus interviews and a Delphi procedure were used to develop a self-administered questionnaire based on the Graham questionnaire. Nurses employed by community healthcare organizations and independent nurses in private practices participated ($n = 789$). The data were collected in 2006. Compression was applied in 58.7% of patients with venous ulcers. Pain was present in 82.9%. A third of patients with pain received analgesics, but half of these patients (52.1%) took analgesics as prescribed. Half of the nurses (50.8%) gave lifestyle advice related to the leg ulcer. It was mainly instructions about leg elevation (68.3%), promoting physical activity (39.8%) and optimizing nutrition (16.7%) that were provided. Nurses who perceived themselves to have adequate leg ulcer knowledge and skills were 3.75 times more likely to provide lifestyle advice compared with those lacking such knowledge and skills. Nurses who found leg ulcer care not rewarding, rarely successful or difficult gave statistically significantly less lifestyle advice than those who found it rather rewarding, successful and not difficult. Patients with leg ulcers receive less than optimum care and patient education. A particular challenge lies in leg ulcer education programmes and pain management.

Zulkowski, Ayello, and Wexler (2007) conducted certification and Education: Do They Affect Pressure Ulcer Knowledge in Nursing?. A convenience sample of 460 nurses are enrolled in this study, located in both urban and rural areas, provided demographic information and completed a standardized pressure ulcer knowledge test using (Pieper Pressure Ulcer Knowledge Tool). The mean standardized test score for the total sample was 78%, with nurses certified in wound care scoring 89%, nurses certified in specialties other than wound care scoring 78%, and nurses receiving no certification scoring 76.5%. Wound care certification and education significantly affect nursing knowledge.

Hidalgo, Fernandez, Medina, and Ortega (2007) conducted pressure ulcer care in Spain: nurses' knowledge and clinical practice. A survey was carried out between September 2001 and June 2002, targeting a cluster randomized sample of 2006 Registered Nurses and Licensed Practice Nurses working at hospitals, primary healthcare centres and elder care centres in Andalusia (Spain). The response rate was 36.9% ($n = 740$). The level of knowledge of prevention interventions was 79.1%, while that of treatment interventions was 75.9%. The levels of implementation in clinical practice were notably lower: 68.1% for prevention, and 65.3% for treatment. Nurses holding a university degree obtained higher scores, and those who had received specific

education in pressure ulcer care obtained higher scores both for knowledge and clinical practice. Taking part in research projects also improved knowledge implementation. Although most of the recommendations on pressure ulcer care found in guidelines are well known by nurses, there is a group of interventions about which they have insufficient knowledge and low implementation rates.

Ashton & Price (2006) conducted Survey comparing clinicians' wound healing knowledge and practice. A cross-sectional design in the form of a self-administered postal questionnaire was sent to 238 staff of a general hospital to compare wound healing knowledge and practice. Seventy four questionnaires were returned (response rate=31.09%). No significant statistical differences were identified between the groups. Wound care practices demonstrated a lack of evidence-based care along with the continued use of outdated and hazardous practices. Knowledge was primarily sourced from colleagues and personal experience, with journals and courses favoured by the specialized clinicians. The clinicians rated pre-graduate training as inadequate. Medical staff dominated decision making in specialized groups, while the responsibility was shared between the nurse and the tissue viability nurse in non-specialized

areas. The clinicians identified clinical effectiveness and availability as influencing their dressing choices.

Gunningberg (2006) conducted EPUAP pressure ulcer prevalence survey in Sweden: a two-year follow-up of quality indicators. A cross-sectional survey design with comparison between data collected in 2002 and 2004. All inpatient areas were surveyed in the surgical, medical, and geriatric departments in a university hospital. A total of 369 patients were included. The European Pressure Ulcer Advisory Panel data collection form including some additional questions. The 1-day survey was conducted on March 23, 2004. Each patient was visited by 2 registered nurses, who inspected the patient's skin for any pressure ulcer classified according to the EPUAP grading system. There were no significant differences in gender, age, or Braden score between the patients in surgical, medical, or geriatric care in 2002 and 2004. The overall prevalence of pressure ulcers was 33.3% (grade 1 excluded: 10.9%) in 2002 and 28.2% (grade 1 excluded: 14.1%) in 2004. In surgical care, the prevalence was reduced from 26.8% to 17.3% ($P = .051$). In medical care, the prevalence was 23.6% in 2002 and 26.7% in 2004. Corresponding prevalence figures for geriatric care were 59.3% and 50.0%. A quarter of the patients in surgical care, a third in medical care, and more than half in geriatric care had a pressure ulcer upon arrival

at the ward. The use of pressure-reducing mattresses had increased significantly from 16.0% to 42.7% in medical care ($P = .000$). The EPUAP methodology has facilitated the introduction of pressure ulcer as a quality indicator at hospital level. Pressure ulcer prevalence surveys with a standardized methodology should be repeated on a regular basis in order to stimulate quality improvement.

Harrison, Graham, Lorimer, Friedberg, Pierscianowski, and Brandys (2005) conducted leg-ulcer care in the community, before and after implementation of an evidence-based service international practice recommendations and guidelines were adapted to make a new clinical protocol. The new model, for a dedicated service staffed by specially trained registered nurses, established initial and ongoing assessment time frames and provided enhanced linkages to medical specialists. Data were collected for 1 year before and after implementation; outcome measures included 3-month healing rates, quality of life and resource usage. Three-month healing rates more than doubled between the year before implementation (23% [18/78]) and the year afterward (56% [100/180]). The number of nursing visits per case declined, from a median of 37 to 25 ($p = 0.041$); the median supply cost per case was reduced from \$1923 to \$406 ($p = 0.005$).

Reorganization of care for people with leg ulcers was associated with improved healing and a more efficient use of nursing visits.

Kimura & Pacala (2007) conducted pressure ulcers in adults: family physicians' knowledge, attitudes, practice preferences, and awareness of AHCPR guidelines. A questionnaire was sent to a random sample of active members of the Minnesota Academy of Family Physicians. Information was collected on respondent demographics, practice characteristics, training, and awareness of AHCPR guidelines. Knowledge about pressure ulcers was assessed with a 43-item test. Attitudes about pressure ulcer treatment were measured on a Likert-type scale. Four case scenarios were used to explore preferences. Of 292 potential respondents after exclusion, 155 (53.1%) returned questionnaires. Regression analysis revealed that taking care of more elderly patients, completing a residency, being board-certified, and being aware of the AHCPR guidelines were independently associated with higher knowledge scores. Virtually all (99%) the respondents felt that it was the family physician's role to provide pressure ulcer care, whereas 70% felt that they had not been adequately trained to do so. There was a wide variety of practice preferences. Approximately 70% of physicians were not aware of the AHCPR guidelines. Most family physicians feel ill-prepared to manage pressure ulcers, suggesting a need to increase educational efforts for this important problem.

Knowledge about pressure ulcers could possibly be enhanced by more clinical exposure to older patients, rigorous residency training, and review of AHCPR guidelines.

Graham, Harrison, & Keast (2003) conducted knowledge and attitudes regarding care of leg ulcers. Survey of family physicians. Design of this study is self-administered, cross-sectional faxed and mailed survey. Participants of this study are all physicians in the region who were members of the College of Family Physicians of Canada. Response rate was 62%. During 1 month, 107 physicians reported having 226 patients with leg ulcers; only a few patients had had ultrasound assessment. Few physicians (16%) were confident about managing leg ulcers; 61% reported not knowing enough about wound-care products. More than 50% were unaware that compression is effective treatment for venous ulcers. Problems reported were lack of evidence-based clinical practice guidelines for leg ulcer care (82%); absence of evidence-based protocols in home-care agencies (72%); lack of access to wound-care products (69%) and wound-care centres (66%); and poor communication among health care workers (60%). Better access to diagnostic assessments and use of compression therapy for venous leg ulcers would improve care.

Maylor & Torrance (1999) conducted pressure sore survey., part 2: nurses' knowledge. This is the second of a three-part article

which investigates the prevalence of pressure sores and nurses' knowledge and attitudes in one NHS trust. This study was designed to explore the assumption that lack of knowledge might be a contributory factor to pressure sore formation. A cross-section of trained and untrained staff over several areas of work in the acute and community settings were represented. Overall, the differences in awareness and opinions among staff were not indicative of major deficits in knowledge that could account for failure to prevent pressure sores. It is suggested that the problem may well be one of individual or organisational motivation.

Beitz, Fey and O'Brien (1998) conducted perceived need for education vs. actual knowledge of pressure ulcer care in a hospital nursing staff. The relationship between perceived need for further education in wound care issues and actual knowledge of pressure ulcer care was examined among 86 professional and nonprofessional nursing staff members of a community urban hospital. A weak correlation between perceived need for further education and actual wound care knowledge base was found. Participants were poorly informed in several basic aspects of pressure ulcer care while generally desiring more wound care education. These results are discussed in light of future educational needs vis-a-vis current "re-engineering" efforts in nursing personnel.

CHAPTER III

RESEARCH METHODOLOGY

This chapter deals with methodology adopted for the study. It includes research approach, research design, setting sample and sampling technique, instrument, data collection procedure, plan for data analysis, and ethical considerations.

RESEARCH APPROACH

The research approach adopted for the study was survey approach.

RESEARCH DESIGN

The descriptive correlational design was used to explore the nurses' attitude and knowledge regarding modern wound care dressing management among nurses in surgical ward 4 Al Sabah Hospital Kuwait. In addition, the relationships among nurses' attitudes and knowledge were examined.

SETTING OF THE STUDY

The study was conducted in Surgical Ward 4 Al Sabah Hospital Kuwait. It is a Government Hospital. The samples were selected from the surgical ward.

POPULATION

The population of the study is nurses of Al Sabah Hospital Kuwait.

CRITERIA FOR SAMPLE SELECTION

1. Inclusion Criteria

Nurses currently employed under Surgical Ward 4 Al Sabah Kuwait Hospital either assigned at the pay or clinical division who understands the English language.

2. Exclusion Criteria

Excludes other Surgical Ward 4 Al Sabah Kuwait Hospital healthcare staffs such as residents, consultants, radiation and medical technologist and nurse aids.

3. Withdrawal Criteria

In any case that the participant decides not to take part in this research the participants may stop answering the survey at any time that they wish without their job being affected.

SAMPLING TECHNIQUE

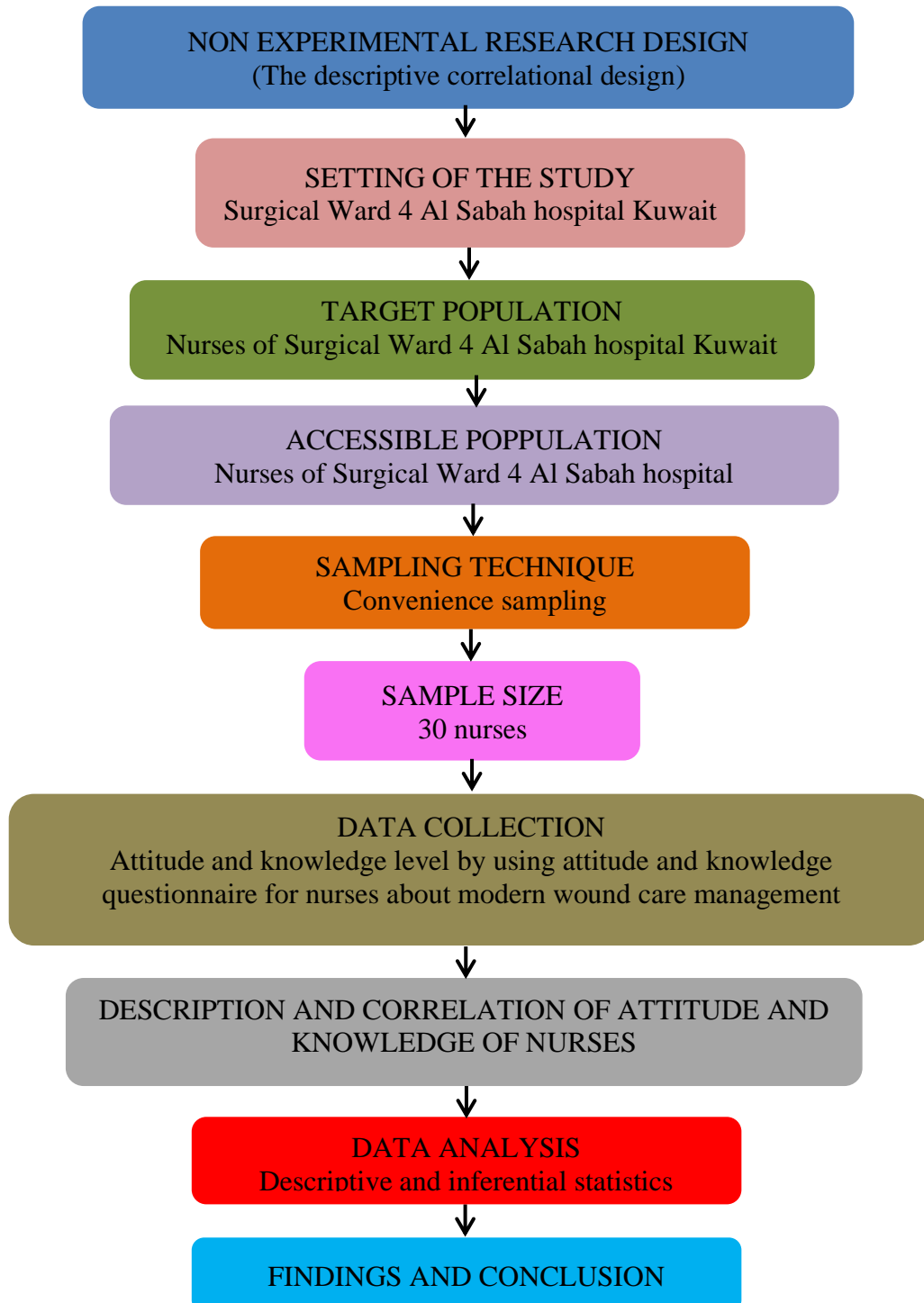
Convenient Sampling techniques used to select the samples.

SAMPLE SIZE

The sample size included for the study consist of 30 nurses.

PROCESS FLOW

Fig 1: SCHEMATIC REPRESENTATION OF RESEARCH DESIGN



INSTRUMENT AND SCORING PROCEDURE

The tool consist of 3 sections:

1. Section I

It deals with demographic data such as age, sex, and educational status,

2. Section II

This section consist of 20 short answer questions to assess the knowledge of nurses regarding modern wound care dressing management for each correct response score “1” was given and for the incorrect response ‘0’ score was given. The total score selected was 20.

3. Section III

This section consist of 20 questions to assess the attitude of nurses, for this 5 point likert scale was used to assess the attitudes.

Scoring Procedure

Part – II: Structured questionnaire on knowledge.

It consist of 20 questions. A score of “1” for each correct response and ‘0’ for each incorrect response. The total score is 20.

TOOL VALIDATION

The validity of the questionnaires of nurses’ attitude and knowledge regarding modern wound care management was assessed by a panel of three experts. There were two experts being nurse educator and experienced researcher from Faculty of Nursing, Middle East University FZE, another was a physician who is expertise in wound care in Kuwait. The experts’ comments were

used to modify each questionnaire for its appropriateness. Content validity was obtained from the following experts:

1.
2.
3.

REABILITY

Internal consistency reliability of the nurses' attitude and knowledge questionnaires were examined through a pilot study with 20 nurses from Hospital in Kuwait who had similar characteristics to the subjects in this current study. Formula of Kuder-Richardson 20 was used for internal consistency reliability of knowledge questionnaire yielded at .74 and Chronbach's alpha coefficient value of .73 was yielded for attitude questionnaire.

PILOT STUDY REPORT

A formal permission from the Medical Superintendent was obtained to conductt the pilot study at Al Sabah Hospital Kuwait and the Principal of Middle East University FZE. The pilot study was conducted from dd.mm.yy to dd.mm.yy. Thirty samples were selected for this study. No major practical constraint was faced during the pilot study. The practicability and feasibility of the tool was assessed.

DATA COLLECTION PROCEDURE

A formal permission from the Medical Superintendent was obtained to conduct the study at Surgical Ward 4 of Al Sabah Hospital, Kuwait. To assess the attitude and knowledge of nurses' with regard to modern wound care dressing management. Nurses were selected based on inclusion criteria. Clear explanation will be given about the study purpose and its benefits and informed consent will be obtained. Comfortable seating will be arranged for nurses and structured questionnaire will be administered individually to them for 15-20 minutes.

PLAN FOR DATA ANALYSIS

The data will be analyzed in terms of the objectives of the study using descriptive and inferential statistics.

- Frequencies and percentage for the analysis of demographic data
- Mean score, percentage and standard deviation for the attitude and knowledge level is to be used.
- The statistical method used for data analysis frequency, percentage, correlation and chi square test.

DATA ANALYSIS PLAN

Table 1: Data Analysis Plan

Data Analysis Plan			
No.	Data Analysis	Methods	Remarks
1.	Descriptive Statistics	Frequency Percentage	To describe the demographic variables of nurses
		Frequency Percentage	To assess the attitude and knowledge regarding modern wound care dressing management among nurses
2.	Bivariate analysis	Correlation	To Correlate the knowledge and attitude of nurses regarding modern wound care dressing management.

ETHICAL CONSIDERATIONS

1. Privacy and Confidentiality

The identity will be withheld from the public. Only the principal investigator had access to the questionnaire. To ensure confidentiality, the healthcare workers will be given the option not to write their name or only their initials will be used.

2. Recruitment

The participants of this study will be obtained through random sampling. Informed consent will be signed before the questionnaire is answered. Any possible withdrawal to the study will be accepted.

3. Benefits

This study would help us identify whether the information the healthcare workers give/teach their patient is correct regarding

daily wound care. This will likewise help improve the knowledge of the involved participants.

4. Risk

Since this study entails to review the knowledge of hospital staffs, their identity will not be disclosed so as to protect them from being misjudged in case their knowledge was not adequate.

5. Compensation and expenses

No monetary incentives in cash or kind would be provided. Investigators would also not receive any compensation for the study. All financial expenses were shouldered by the investigators.

6. Informed consent process

Informed consent would be obtained by the primary investigators from the health care workers who will answer the questionnaire as well as approval by the Institutional Review Board.

7. Conflict of interest

There would be no conflict of interest arising from financial, familial considerations, of the principal investigator and the study site. The investigators were compliant to Good Clinical Practice Guidelines to avoid any conflict of interest.

CHAPTER IV

ANALYSIS AND INTERPRETATION

This chapter deals with the description of sample, characteristics, analysis and interpretation of data collected from nurses regarding modern wound care dressing management among nurses in surgical ward 4 Al Sabah Hospital Kuwait.

The present study was designed to assess the knowledge and attitude of nurses regarding modern wound care dressing management among nurses in surgical ward 4 Al Sabah Hospital Kuwait. The collected data was organized and interpreted using descriptive and inferential statistics and was coded and analyzed as per objectives of the study under the following headings.

ORGANIZATION OF DATA:

The data has been described and organized as follows:

SECTION – A : Distribution of demographic variables of nurses

SECTION – B : Assessing the knowledge and attitude regarding modern wound care dressing management among nurses in surgical ward 4 Al Sabah Hospital Kuwait.

SECTION – C : Correlation of knowledge and attitude of nurses regarding modern wound care dressing management among nurses in surgical ward 4 Al Sabah Hospital Kuwait.

SECTION A

Table: 2

**FREQUENCY AND PERCENTAGE DISTRIBUTION OF
DEMOGRAPHIC VARIABLES OF THE NUSES**

No	Variabel	Frequency	Percentage
1.	Age a. 25 -34 years b. 35 -44 years c. 45 – 54 years d. > 55 years	12 12 3 3	40% 40% 10% 10%
2.	Gender a. Female b. Male	17 13	57% 43%
3.	Level of education a. Diploma in Nursing b. BSN c. MSN	20 10 0	67% 33% 0%
4.	Formal training of modern wound care a. Yes b. No	9 21	30% 70%
5.	Length of duty as nurses a. 1 - 10 years b. 11 - 20 years c. 21 -30 years d. 31 - 40 years	15 11 2 2	50% 37% 7% 7%

Table -1 shows that 12 (40 %) nurses were in the age group of 25- 34 years and 35 -44 years. Regarding the gender, 17 (57 %) nurses were female and 13(43%) were male. Almost 20(67 %) nurses had diploma in nursing level of education and 10 (33 %) nurses had bachelor degree in nursing as their level of education. A majority of 21 (70 %) nurses had no experience formal training of modern wound care dressing management. Regarding length as nurses in hospital, 15(50 %) nurses had 1-10 years experience and 11 (37 %) nurses had 11 - 20 years experience as nurses in hospital.

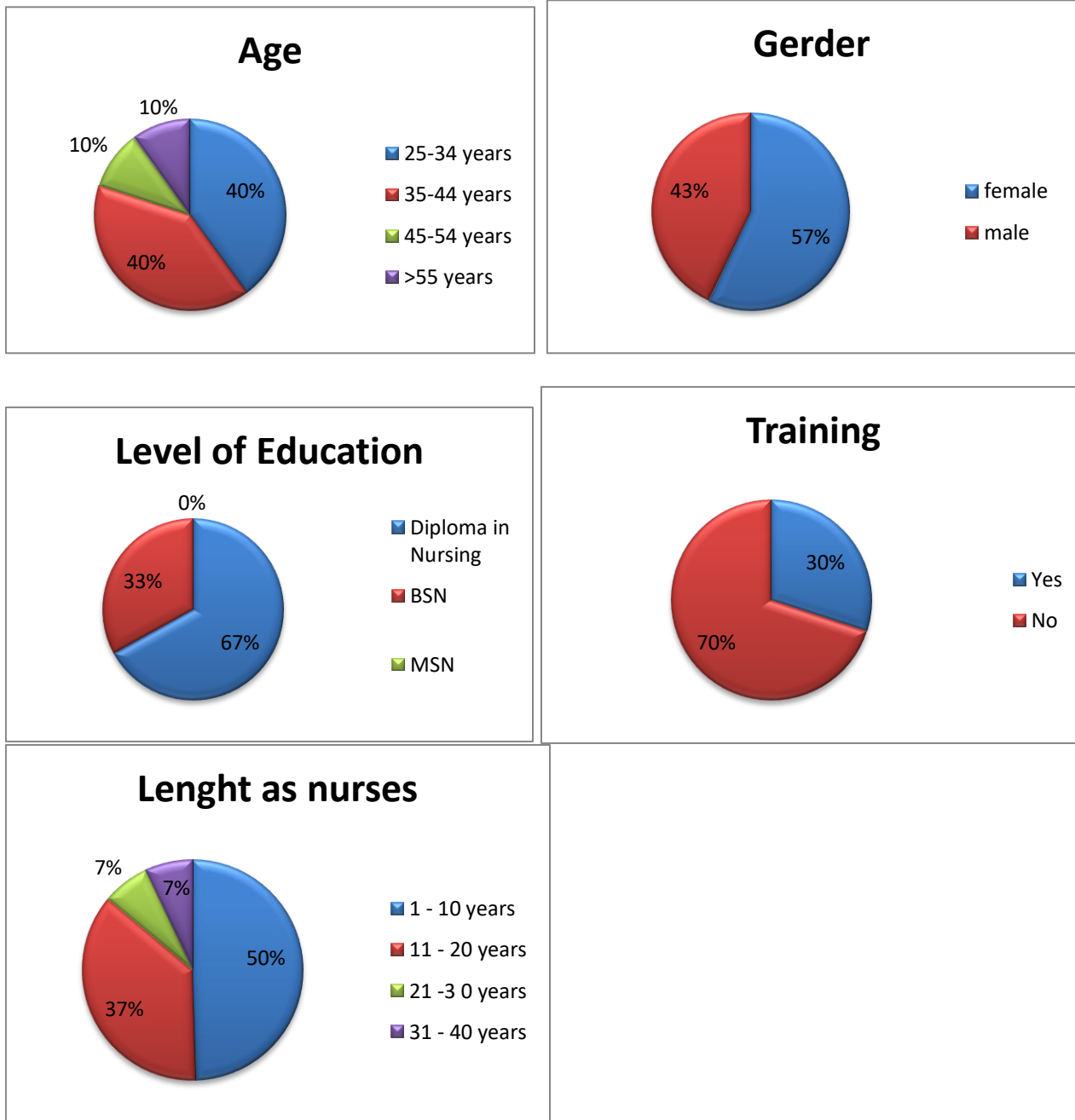


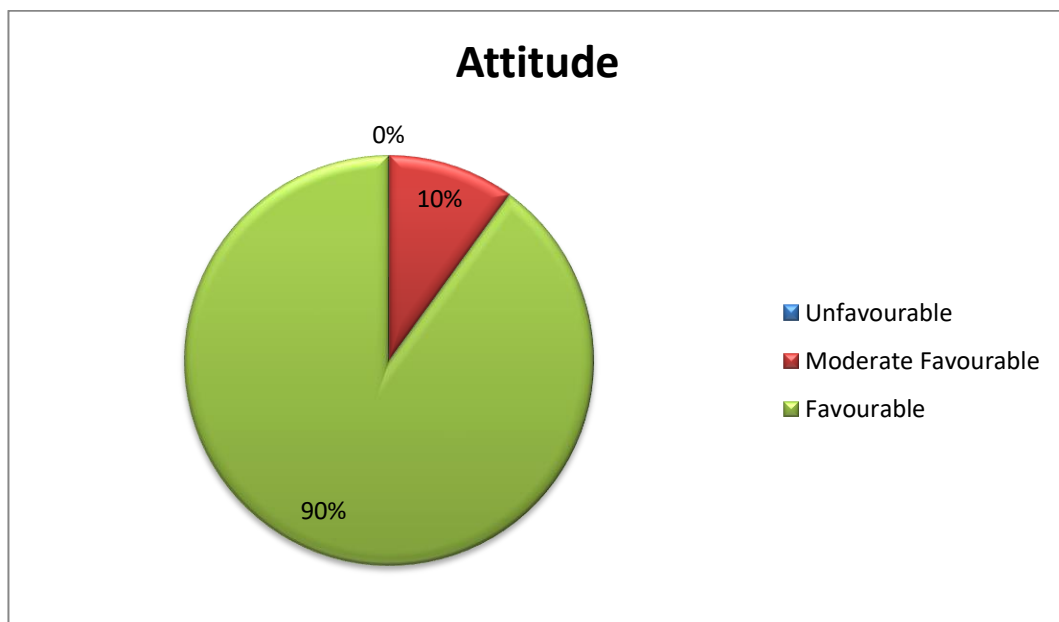
FIG: 2. DISTRIBUTIONS OF THE SUBJECTS ACCORDING TO DEMOGRAPHIC VARIABLES

SECTION B

Table: 3

FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF ATTITUDE AMONG NURSES

Level of Attitude	Frequency	Percentage
Un Favourable (<34%)	0	0%
Moderately Favourable (34-66%)	3	10%
Favourable (\geq 67%)	27	90%
Total	30	100%



**FIG: 3. DISTRIBUTIONS OF THE SUBJECTS ACCORDING
TO LEVEL OF ATTITUDE**

Table- 2 shows that 27(90 %) nurses had favourable attitude and 3(10 %) had moderate favourable attitude about modern wound care dressing management.

SECTION C

Table: 4

FREQUENCY AND PERCENTAGE DISTRIBUTION OF LEVEL OF KNOWLEDGE AMONG NURSES

Level of Knowledge	Frequency	Percentage
Poor (<34%)	3	10%
Moderate (34-66%)	24	80%
Good (\geq 67%)	3	10%
Total	30	100%

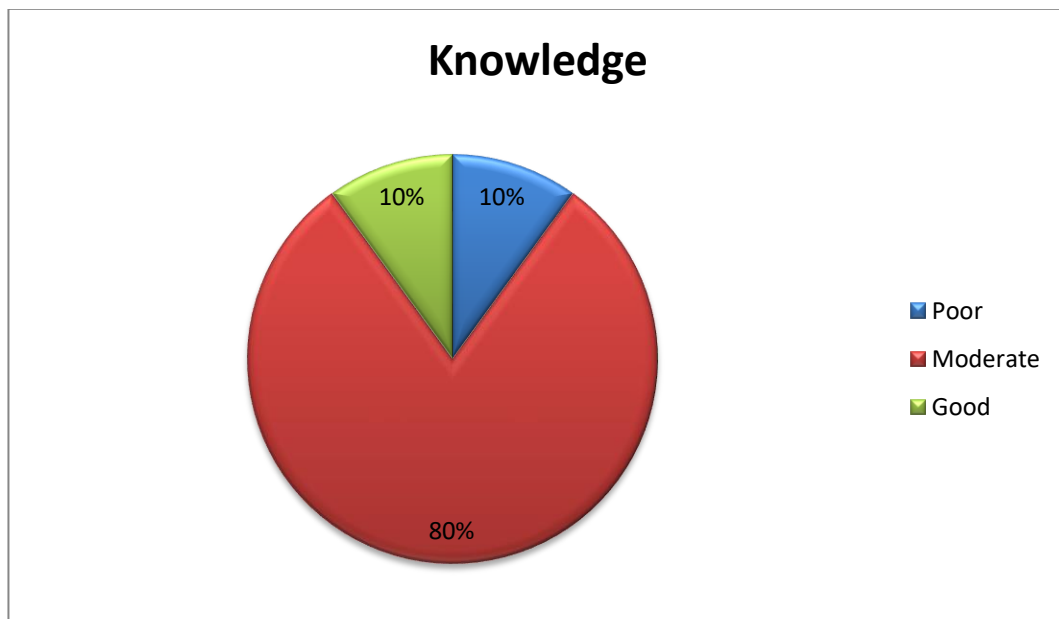


FIG: 4. DISTRIBUTIONS OF THE SUBJECTS ACCORDING TO LEVEL OF KNOWLEDGE

Table- 3 shows that 24(80 %) nurses had moderate knowledge and 3(10 %) had poor knowlegde about modern wound care dressing management. And only 3(10%) nurses had good level knowledge about modern wound care dressing management.

Table: 5**ATTITUDE AND KNOWLEDGE LEVEL AMONG THE NURSES**

NUMBER OF RESPONDEN	ATTITUDE			KNOWLEDGE		
	SCORE	KODE	LEVEL	SCORE	KODE	LEVEL
1.	76	3	favourable	55	2	moderate
2.	73	3	favourable	40	2	moderate
3.	70	3	favourable	50	2	moderate
4.	57	2	favourable moderate	50	2	moderate
5.	72	3	favourable	30	1	poor
6.	70	3	favourable	50	2	moderate
7.	77	3	favourable	55	2	moderate
8.	69	3	favourable	55	2	moderate
9.	87	3	favourable	70	3	good
10.	73	3	favourable	40	2	moderate
11.	76	3	favourable	55	2	moderate
12.	73	3	favourable	40	2	moderate
13.	70	3	favourable	50	2	moderate
14.	56	2	favourable moderate	50	2	moderate
15.	72	3	favourable	30	1	poor
16.	70	3	favourable	50	2	moderate
17.	77	3	favourable	55	2	moderate
18.	69	3	favourable	55	2	moderate
19.	87	3	favourable	70	1	good
20.	73	3	favourable	40	2	moderate
21.	76	3	favourable	55	2	moderate
22.	73	3	favourable	40	2	moderate
23.	70	3	favourable	50	2	moderate
24.	58	2	favourable moderate	50	2	moderate
25.	72	3	favourable	30	1	poor
26.	70	3	favourable	50	2	moderate
27.	77	3	favourable	55	2	moderate

28.	69	3	favourable	55	2	moderate
29.	87	3	favourable	70	3	good
30.	73	3	favourable	40	2	moderate
TOTAL	1=0; 2=3; 3=27			1=3; 2=24; 3=3		

Table 4 shows that 27 nurses had favourable attitude, 3 had moderate favourable attitude, and no one had unfavourable attitude about modern wound care dressing management. And shows that 24 nurses had moderate knowledge, 3 had poor knowledge and only 3 nurses about modern wound care dressing management.

Table: 6

MEAN AND STANDARD DEVIATION OF KNOWLEDGE SCORE

Descriptives		Statistic	Std. Error
ns_knowledge	Mean	72.40	1.325
	95% Confidence Interval for Mean		
	Lower Bound	69.69	
	Upper Bound	75.11	
	5% Trimmed Mean	72.48	
	Median	72.50	
	Variance	52.662	
	Std. Deviation	7.257	
	Minimum	56	
	Maximum	87	
	Range	31	
	Interquartile Range	6	
	Skewness	-.143	.427
	Kurtosis	1.410	.833

Table 5 shows that in the mean of knowledge score was 74.40 with the standard deviation of 7.257.

Table: 7**NORMALITY TEST OF KNOWLEDGE SCORE**

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ns_knowledge	.220	30	.001	.881	30	.003

a. Lilliefors Significance Correction

Table 6 shows that the normality Kolmogorov Smirnov Test of knowledge score was 0.001, it refers to $0.001 < 0.05$ which revealed that the knowledge score has an normal data.

Table: 8**MEAND AND STANDARD DEVIATION OF ATTITUDE SCORE**

Descriptives			Statistic	Std. Error
ns_attitude	Mean		49.50	1.923
	95% Confidence Interval for Mean	Lower Bound	45.57	
		Upper Bound	53.43	
	5% Trimmed Mean		49.44	
	Median		50.00	
	Variance		110.948	
	Std. Deviation		10.533	
	Minimum		30	
	Maximum		70	
	Range		40	
	Interquartile Range		15	
	Skewness		-.001	.427
	Kurtosis		.180	.833

Table 7 shows that in the mean of attitude score was 49.50 with the standard deviation of 10.533.

Table: 9

NORMALITY TEST OF ATTITUDE SCORE

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ns_attitude	.219	30	.001	.901	30	.009

a. Lilliefors Significance Correction

Table 8 shows that the normality Kolmogorov Smirnov Test of attitude score was 0.001, it refers to $0.001 < 0.05$ which revealed that the attitude score has a normal data.

Table: 10

CORRELATION TEST OF KNOWLEDGE AND ATTITUDE SCORE

Correlations			
		ns_attitude	ns_knowledge
Spearman's rho	ns_attitude	Correlation Coefficient	1.000
		Sig. (2-tailed)	.067
		N	30
	ns_knowledge	Correlation Coefficient	.338
		Sig. (2-tailed)	.067
		N	30

Table 9 shows that Correlation Spearman Test score for correlation of the knowledge and attitude variable was 0.067 ($P > 0.05$) which revealed that the level of attitude and knowledge has

no significant. There is no correlation the knowledge and attitude regarding modern wound care dressing management among nurses in Surgical Ward 4 Al Sabah Hospital Kuwait.

CHAPTER V

DISCUSSION

This chapter deals with the discussion of the study with appropriate literature review, statistical analysis and findings of the study according to the objectives. The aim of the present study is to assess the knowledge and attitude of nurses regarding modern wound care dressing management among nurses in surgical ward 4 Al Sabah Hospital Kuwait.

Discussion

The study aimed at exploring the level of nurses' knowledge and attitudes regarding modern wound care dressing management and to examine the relationships among those variables. The findings revealed that nurses had a moderate level of knowledge and a favourable level of attitudes, regarding modern wound care dressing management. There was a non-significant relationship between nurses' knowledge and attitude. The findings are discussed in four parts: 1) level of knowledge; 2) level of attitude; and 3) relationships among knowledge and attitude.

Level of Knowledge

The findings showed that the nurses who participated in this study had a moderate level of overall knowledge regarding modern wound care dressing management. There are three possible reasons to explain the very low level of overall knowledge of this group of subjects.

First, their formal education background and training experience may be a factor related to this very low level of knowledge. Most of the nurses

20(67%) graduated with a diploma followed by a bachelor degree 10(33%). The content included in both these curriculums was not specifically focused on up-to-date information about modern wound care dressing management. In addition, the majority of nurses 21(70%) were not trained in the modern wound care dressing management's program. Inadequate up-dated information about modern wound care dressing management was included in both curriculums. The lack of opportunity to be trained about up-dated on modern wound care dressing management programs might preclude the nurses from remembering, understanding, and applying suitable knowledge regarding modern wound care dressing management. The findings of this study are similar to a previous study in which lack of training in wound care dressing management in Irish nurses was one barrier to nurses accessing to up-dated information about pressure ulcer prevention (Moore & Price, 2004). Ashton & Price (2006) conducted Survey comparing clinicians' wound healing knowledge and practice. A cross-sectional design in the form of a self-administered postal questionnaire was sent to 238 staff of a general hospital to compare wound healing knowledge and practice. Seventy four questionnaires were returned (response rate=31.09%). No significant statistical differences were identified between the groups. Wound care practices demonstrated a lack of evidence-based care along with the continued use of outdated and hazardous practices. Knowledge was primarily sourced from colleagues and personal experience, with journals and courses favoured by the specialized clinicians. The clinicians rated pre-graduate training as inadequate. Medical staff dominated decision making in specialized groups, while the responsibility was shared between the nurse

and the tissue viability nurse in non-specialized areas. The clinicians identified clinical effectiveness and availability as influencing their dressing choices.

Second, it has been proposed that the greater the working experience the higher the knowledge gained (Pancorbo-Hidalgo et al., 2007). However, the additional analysis did not support this proposition. There were significant differences in nurses' knowledge with different working experiences. It was found that nurses with more years of working experience (21-30 years) had lower levels of knowledge than those with less years of working experience (1-10 years). This may be because nurses with more years of working experiences may have had less chance to gain access to up-to-date information about regarding modern wound care dressing management. It was found that nurses with many years of clinical experience (over 20 years) had lower levels of knowledge regarding regarding modern wound care dressing management and its associated care due to their not up-dating their knowledge (Mockridge & Anthony, 1999; Pancorbo-Hidalgo et al., 2007).

Third, the lack of learning resources for nurses to up-date their knowledge would be another reason for the very low level of knowledge. In Kuwait there is a lack of learning resources for nurses to up-date their knowledge. Nursing journals are not available even at the nursing institutes or hospitals. Only some old nursing journals are available at the KuwaitvNursing Council. These facts indicate that nurses still have an inadequate knowledge in some areas of modern wound care dressing

management due to their knowledge not being up-to-date either by lack of formal training or reading text books or journals.

Level of Attitude

Results indicated that the majority of nurses showed favourable of attitude regarding modern wound care dressing management. The current study also demonstrated that all the dimensions of attitudes were found to be at the favourable level. This finding indicates that nurses either care and were indifferent about the regarding modern wound care dressing management. It means that nurses were aware of regarding modern wound care dressing management, or they had idea about regarding modern wound care dressing management. In this present study factors related to this favourable of attitude may be individual and/or organizational. Dugdall & Watson (2009) conducted what is the relationship between nurses' attitude to evidence based practice and the selection of wound care procedures?. Survey design using a questionnaire completed by 156 qualified nurses working in three UK National Health Trusts. A statistically significant difference was seen between those nurses with a tissue viability link nurse role ($p = 0.002$) and those without a link nurse role; those educated to first degree ($p < 0.001$) and those without a first degree; and those who had received formal tissue viability training ($p < 0.001$) and those with informal tissue viability training. There was also a highly statistically significant relationship between the clinical grade of staff and the overall attitude to evidence-based practice ($p < 0.001$). Nurses who had attained a higher level academic qualification, had a tissue viability link nurse role and those who

had received formal tissue viability training scored generally higher in the wound care knowledge tests and in attitude to evidence-based practice. The care received by patients in relation to wound care could be dependent upon factors that are related to the individual characteristics of the nurse providing the care and these factors, in turn, are related to education and training with respect to wound care. Better general education and better specific training in wound care could lead to better wound care.

Relationships Among Knowledge and Attitude

No significant relationship was found between knowledge and attitude regarding modern wound care dressing management. According to the KAP model, one factor that affects attitudes is a knowledge-base in a specific area. However, the findings of this study do not support the KAP model. This may be because nurses' attitudes were influenced by their concern, purpose, awareness, or traditional values that they learned from nursing teachers or senior nurses. This was when they worked for a long period of time when their knowledge was at very low level. Therefore, knowledge in itself is not related to nurses' development of attitudes. Future research should explore the nurse's awareness, purpose, or traditional values in relation to modern wound care dressing management. The small sample size of this study could be another factor for the lack of a link between nurses' knowledge and attitude. According to Bloom (1956), effective education can bring change in human behavior especially regarding positive attitudes. It has been showed that proper education and training can influence nurses' positive attitude regarding modern wound care dressing management (Moore & price, 2004).

According to the KAP model, changes in the knowledge and attitude of individuals can affect practice. In this regard, nurses need further continuing education and training programs regarding modern wound care dressing management that could influence positive attitude; ultimately, leading to effective nursing practice of modern wound care dressing management. Kadam & Shinde (2014) conducted effectiveness of structured education on caregiver's knowledge and attitude regarding colostomy care. Experimental approach with one group pre test post test design was used for 30 caregivers and convenient sampling technique was used. Majority 36.66 % of caregivers belonged to the age group of 31-40 years, and 66.67% were females and 33.33% with. 86.67% participated in this study were Married. The knowledge score gained by the respondents in the results shows that the mean value of knowledge in pre test was 7.43 and at post assessment was 13.77 since the "P" value for the test is less than 0.05,.The findings showed that in pre test, attitude score the maximum, 66.670/0 of the samples got the score between 61-80 (positive attitude), in post test attitude score, the maximum, 700/0 of the samples got the score 81& above (strongly positive attitude),there was significant relationship with education and place of residence subjects and pre test Knowledge score regarding colostomy care of patient. Whereas there was significant relationship with education of subjects and pretest attitude score. Structured education programme was highly effective to improve the knowledge score and to improve the attitude score of subjects/ caregiver towards colostomy care of patient.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of the study findings, the implications and recommendations for nursing practice, education and administration, and suggestions for future research. A descriptive study was conducted to explore the level of nurses' knowledge and attitude regarding modern wound care dressing management. In addition, the relationships between nurses' knowledge and attitude were also examined for nurses in surgical ward 4 Al Sabah Hospital of Kuwait. The study was carried out from August, 2016 to October, 2016. The participants were all nurses who worked in those selected unit.

Summary of the Study Findings

The level of nurses' knowledge was at moderate level regarding modern wound care dressing management and the level of nurses' attitude was at favourable. All sub-dimensions of attitude were at favourable attitude. The result of this study is no correlation existed between nurses knowledge and attitude ($r = .067, p > .05$).

Strength and Limitation

This exploration of the current situation of nurses' knowledge and attitude for modern wound care dressing management could

provide baseline data for the further improvement of nursing care in this field Kuwait. There are some limitations to this study. The main limitation was using a self-report questionnaire to examine nurses' practice. The responses might not reflect actual nursing practices. Another limitation was the generalizability of the findings because this study was conducted in one ward of hospital. The findings may not be generalized to other ward of hospitals or to hospitals at other levels.

Implications and Recommendations

Despite the above limitations, it is recommended that Kuwaiti nurses need up-dated knowledge and information about modern wound care dressing management in order to improve their practice. Although the attitude level was favourable and the knowledge level was moderate. These findings indicated that attitudes are important factors in relation to practice on modern wound care dressing management. In this regard, nurses need further continuing education, refresher courses, and training program about modern wound care dressing management in order to enhance their knowledge and attitude of care in this field. Following recommendations are put forward to improve nurses' knowledge and attitude regarding modern wound care dressing management:

1. In-service training and refresher courses about pressure

ulcer prevention should be designed for Kuwaiti nurses. This should provide them with up-dated knowledge to understand modern wound care dressing management which can be translated into practice.

2. Hospital policies and guideline are needed to promote nurses' attitude in relation to modern wound care dressing management.
3. Further interventions studies should be initiated to examine the level of knowledge, and attitude after nurses participate in in-service training programs.
4. A training program on modern wound care dressing management should also be conducted for nurse-teachers in order to improve the knowledge they are expected to transmit to students.
5. A replication study is recommended in other settings to promote the generalizability of the findings above.
6. The results of this study should be shared with stake holders such as nurse administrators, nurse teachers, nurse researchers, nurse clinicians, hospital administrators and the public. This should make the problem of modern wound care dressing management a public concern.

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APPENDIX I

Informed Consent Form

Consent for Participation in Research

I volunteer to participate in a research project conducted by Mr. Agung Setiyadi from Nursing Faculty of Medicine, Middle East University FZE, Dubai. I understand that the project is designed to gather information about clinical work of nursing on hospital. I will be one of approximately 30 people be participant for this research.

1. My participation in this project is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty. If I decline to participate or withdraw from the study, no one on my campus will be told.
2. I understand that most participant in will find something interesting and thought-provoking. If, however, I feel uncomfortable in any way during this section, I have the right to decline to answer any question or to end this section.
3. Participation involves full filling the questionnaire that given by researcher. This section will last approximately 20-30 minutes.
4. I understand that the researcher will not identify me by name in any reports using information obtained from this collecting data session, and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be

subject to standard data use policies which protect the anonymity of individuals and institutions.

5. I understand that this research study has been reviewed and approved by the Institutional Review Board (IRB) for Studies Involving Human Subjects: Behavioral Sciences Committee at the Nursing Faculty of Medicine, Middle East University FZE, Dubai. For research problems or questions regarding subjects, the

6. I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

7. I have been given a copy of this consent form.

My Signature

Date

My Printed Name

Signature of the Investigator

For further information, please contact:

APPENDIX II

QUESTIONNAIRE

Section 1: Demographic Data

Instruction: Please fill in the blank space or tick mark (√) on your answer in the bracket as indicated.

1. Ageyears old
2. Gender () Female () Male
4. The level of education
 () Diploma in Nursing () Bachelor of Nursing () Master of Nursing
5. Have you received any formal training on modern wound care dressing management since you qualified as a nurse?
 () Yes () No
 If yes, please specify: Year.....
 Place.....Duration.....
6. How long have you been employed as a permanent staff nurse in your hospital? I have been employed as a permanent staff nurse for.....years

Section 2: Modern wound care dressing management survey

Please indicate the correct option by writing an "X" on the correct answer. Each question has only one correct answer.

1. The first step in the care of a patient with a wound is:
 - a. Procuring the supplies needed for the care.
 - b. Determining the amount of wound drainage.
 - c. Evaluating the wound care abilities of the patient's caregiver.
 - d. Obtaining a thorough patient history and conducting a physical exam.
2. An injury that results in damage to the epidermis and part of the dermis is described as a:
 - a. Partial thickness wound.

- b. Subcutaneous wound.
 - c. Full-thickness wound.
 - d. Decubitus ulcer.
3. The wound care order must be evaluated to be sure it includes the following except:
- a. Site to treat, frequency of changes.
 - b. Cleansing solution.
 - c. Primary and secondary dressings.
 - d. Care of surrounding skin.
 - e. Name of institution prescribing doctor is associated with.
4. A health history review will include the following data concerning a wound:
- a. Location and initial size and etiology.
 - b. Chronology of the wound and aggravating and alleviating factors.
 - c. Associated symptoms and drug allergies.
 - d. Evaluation of patient's functional abilities as well as review
- of family history.
- e. A personal and social history and review of system.
 - f. All of the above.
5. Methods of wound documentation include:
- a. Measurement of wound size.
 - b. Tracing of the wound.
 - c. Photographs or diagrams.
 - d. Staging criteria and assessment of periwound skin
- e. All of the above.
6. The ideal dressing for a wound with dry necrotic tissue is:
- a. Foam dressing
 - b. Hydrocolloid gel and covering
 - c. Alginate dressing
 - d. Dry gauze

- e. All of the above
7. The ideal dressing for a wound with slough (wet necrotic tissue) is:
- a. Honey and paraffin gauze
 - b. Mercurochrome
 - X** c. Vacuum dressing
 - d. Dry gauze
 - e. All of the above
8. The ideal dressing for a granulating wound is:
- a. Maggots
 - X** b. Hydrocolloid gel and paraffin gauze
 - c. Alginate dressing
 - d. Dry gauze
 - e. All of the above
9. The ideal dressing for a dry and epithelializing wound is:
- a. Foam dressing
 - X** b. Hydrocolloid gel and paraffin gauze
 - c. Alginate dressing
 - d. Dry gauze
 - e. All of the above
10. The ideal dressing for an ulcer producing excessive exudate is:
- a. Hydrocortisone cream and gauze
 - b. Hydrocolloid gel
 - X** c. Alginate dressing
 - d. Dry gauze
 - e. Peanut butter and gauze
11. Diabetic foot ulceration at the metatarsal joint of the big toe is best treated by:
- a. Weight loss (diet and exercise)
 - X** b. Pressure offloading (plaster cast or adaptation of shoe)
 - c. Antibiotic cream and gauze
 - d. Dry gauze

- e. Amputation
12. Chronic diabetic foot ulceration is often complicated by:
- a. Deep soft tissue infection
 - b. Superficial soft tissue infection
 - c. Myocardial infarction
 - d. Extreme pain.
 - e. Secondary cancer.
13. Removal of callus around a diabetic ulcer:
- a. Requires daily soaks in warm water and macerated skin.
 - b. Can only be performed in a theatre.
 - c. Is harmful and should be avoided.
 - d. Activates wound healing by release of intrinsic growth factors.
 - e. Increases the pressure on the wound area.
14. The ideal wound cleansing solution for a diabetic foot ulcer is:
- a. Povidone-iodene (undiluted)
 - b. Hydrogen peroxide
 - c. Normal Saline
 - d. 10% Acetic acid
 - e. Sodium Hypochlorite
15. Goals of management for infected diabetic foot ulceration includes
- all of the options below **except**:
- a. Thorough wound cleansing
 - b. Debridement of callus and necrotic tissue
 - c. Use of systemic antibiotics
 - d. Offloading of pressure
 - e. Application of biological wound dressings
16. A grade 3 pressure ulcer is characterized by:
- a. A red area with no break in the skin.
 - b. Necrosis to the level of the bony structures.
 - c. The need for urgent surgery.

- d. Involvement of subcutaneous tissues but not fascia.
 - e. Healing within two weeks and does not cause pain.
17. Optimal treatment for pressure ulcers will :
- a. Increase pressure on other bony areas.
 - b. Kill every bacterium in the wound
 - c. Increase the local inflammatory response
 - d. Dry up the wound environment
 - e. Create a moist wound environment
18. Optimal treatment options for pressure ulcers include all of the option below **except** :
- a. Foam dressing + Hydro gel
 - b. Hydrocolloid paste and hydrocolloid dressing
 - c. Alginate dressing
 - d. Gauze and iodine ointment
 - e. Negative pressure wound therapy (a vacuum dressing)
19. Wound evaluation for the purpose of reevaluating treatment objectives should be done:
- a. Daily
 - b. Weekly
 - c. Monthly
 - d. Every 3 months
 - e. Every 6 months
20. Indications for systemic antibiotics include all of below **except**:
- a. All grade 4 pressure ulcers
 - b. Septicemia
 - c. Osteomyelitis
 - d. Advancing cellulitis
 - e. Non-healing pressure ulcers

Section 3: Nurses Attitude Questionnaire

Instruction: Please read each statement carefully and tick '✓' the box that most closely reflects your answer to the following

questions. If you accidentally tick the incorrect box please put an 'X' through the box and then tick the correct box.

- If you are strongly agree with that particular statement, please tick "√" in the box of "strongly agree".
- If you are agree with that particular statement, please tick "√" in the box of "agree".
- If you are neither agree nor disagree with that particular statement, please tick "√" in the box of "neither agree nor disagree".
- If you are disagree with that particular statement, please tick "√" in the box of "disagree".
- If you are strongly disagree with that particular statement, please tick "√" in the box of "strongly disagree".

Strongly agree means you are strongly agree with the statement. 'Agree' means you are agree with the statement. 'Neither agree nor disagree' means you are neither agree nor disagree with the statement. 'Disagree' means you are not agree with the statement. 'Strongly disagree' means you are strongly not agree with the statement. 5 = Strongly agree, 4 = Agree, 3 = Neither agree nor disagree, 2 = Disagree, 1 = Strongly disagree.

No.	Statement	Nurses ' Rating				
		1	2	3	4	5
1.	All patients are at risk for developing wound.					
2.	Most risk factors of wound can be avoided.					
3.	Prevention of risk factors for wound is time consuming for me to carry out.					
4.	In my opinion, nurses can independently provide nursing care to prevent wound.					
5.	I am less interested in wound care than other aspects of nursing care.					
6.	I am aware of an appropriate assessment					

	procedure for wound care management formation.					
7.	My clinical judgment is better than any wound risk assessment tool available to me.					
8.	Patient who is at risk for wound development should be assessed at the first day of admission.					
9.	Wound risk assessment should not be regularly carried out on all patients during their stay in hospital.					
10.	All data about wound should be documented at the time of assessment and reassessment.					
11.	Wound healing should be an important indicator for quality of nursing care.					
12.	Patient's relative should not be advised to assess patient's skin during bathing a patient.					
13.	Patient who is at risk for wound development should be cared by using standard nursing care to prevent another wound.					
14.	I realize to provide nursing care to protect skin breakdown.					
15.	Patient should be cleansed immediately after soiled.					
16.	I realize to apply skin lotion to patient who is at risk for wound formation.					
17.	I think that nutritional status of a patient is not a problem for wound development.					
18.	I intend to assess the amount of food that patient intakes every meal.					
19.	I am aware to turn my patient who is at risk					

	for wound every 2 hours.					
20.	I value that joining educational activities on wound care management is important for my practice					

Thank you for your participation