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**Nurses Perceptions towards the Impact of JCI
Accreditation on Quality of Care and Patients' Safety at
Augusta Victoria Hospital**

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**The Perception of Nurses towards the Impact of JCI
Accreditation on Quality of Care and Patients' Safety at
Augusta Victoria Hospital**

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Dedication

I dedicate this humble work to my country Palestine,

To the soul of my beloved father and mother,

To my lovely daughters Jeslyn, Celein and Leen,

To my dear wife for her endless patience, cooperation and support; without her love, encouragement and understanding I would not be able to make it.

To my colleague nurses and friends at Augusta Victoria Hospital,

To Dr. Asma Imam for her efforts and support to complete this work.

Jihad K. Khair

Declaration

I certify that this thesis submitted for the degree of master, is the result of my own research, except where otherwise acknowledge, and that this thesis (or any part of the same material) has not been submitted for a higher degree to any other university or institution.

Signed:

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Date: 30/12/2015

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Without my family support, I would never dare to think of standing where I am. My lovely wife, thanks for dedicating your efforts, energy and time to support me during difficult time. Thanks for your encouragement, support and extraordinary patience.

ABSTRAT

This study was held at Augusta Victoria Hospital (AVH) between July and August 2015. AVH is a specialized cancer and dialysis care center in East Jerusalem. It is considered the only radiotherapy center and pediatric dialysis center present in Palestine. In May, 2013, AVH became the first Palestinian institution with multiple specialties to hold the accreditation from the Joint Commission. The Joint Commission International (JCI) accreditation is an international evaluation process used to assess and to improve the quality, the efficiency and the effectiveness of health care organizations and guarantees efficient and effective quality of patient care and patient safety. The complexity of the nursing practice has increased at AVH and the nursing roles have expanded in order to respond to the new strategic, highly specialized services at the hospital and to maintain the high quality of care based on the JCI standards and evidence based practices. On the other hands, the perception of nurses towards the JCI accreditation process and its impact on the patients' safety and the quality of care are still unclear and not studied.

The aims of this study are: 1) to assess the nurses' perceptions towards the impact of JCI accreditation on the quality of care and patients' safety at AVH. 2) to assess the relationship between the nurses' perceptions towards the impact of accreditation on the patients' safety and quality of care and selected demographic and organizational factors.

A quantitative descriptive cross-sectional design was used. The researcher adopted a validated self-administered questionnaire from previous studies, and the questionnaire distributed to the total of 125 nurses working at the inpatient and outpatient departments in AVH. The nurses were asked to put the filled questionnaires in sealed envelope in a special box labeled research questionnaires at the reception area in AVH without putting their names or the department they work in. Descriptive and inferential statistics were applied using SPSS 18.

The response rate of participants in this study was 72.8%. The majority of participants were males (60.4%), young below 40 years of age and has Bachelor's degrees in nursing. The majority of nurses (86.6%) were trained in quality and mainly about policies and procedures within the JCI standards. The overall percentage mean scores (PMS) for the nurses' perceptions towards the accreditation impact on quality of care was (71%) and on patients' safety was (77.5%), reflecting the fact that they have positive perception to accreditation impact and that the accreditation benefits the patient, the staff and the hospital with a percentage of (74.25%). There was a significant positive relationship among the nurses' perceptions on the bases of the organizational factors ($\alpha \leq 0.05$) which include leadership commitment and support, strategic quality planning, human resources utilization, quality management, use of data and staff involvement, with the highest correlation in leadership, commitment and support ($r = 0.583$, $\alpha = 0.001$) and the lowest correlation in human resources utilizations ($r = 0.227$, $\alpha = 0.009$).

JCI accreditation is a good tool for improving quality of care and patients' safety. Health care organizations need strategies to reinforce the quality improvement activities including leadership commitment and support, strategic quality planning, human resources utilizations, quality management, use of data and staff involvement in order to improve the quality of health care. However, there is a need to ensure effective quality and safety improvements based on measuring other patient outcome indicators.

نظرة التمريض الى تأثير شهادة الإعتماد الدولي للجودة على جودة الخدمات الصحية و سلامة المريض في مستشفى المُطَّلَع

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إشراف: د. أسى الإمام

الملخص

أجريت هذه الدراسة في مستشفى الأوغستا فيكتوريا (المُطَّلَع) بين شهري تموز و آب من العام 2015. يقع مستشفى المُطَّلَع في شرقي القدس و يعتبر أكبر مركز لعلاج السرطان والمتخصص في غسيل الكلى في القدس الشرقية و فلسطين و الذي يستقبل المرضى من جميع مناطق الضفة الغربية و قطاع غزة.

في أيار عام 2013 حصل المُطَّلَع على شهادة الإعتماد الدولي للجودة من المؤسسة الدولية المشتركة لإعتماد الجودة و السلامة العامة في المستشفيات و المراكز الصحية ويكون بذلك أول مستشفى فلسطيني متعدد التخصصات الحاصل على مثل هذه الشهادة في الجودة. إن الحصول على شهادة الإعتماد الدولي للجودة هي عملية تقييم و وسيلة تحسين في نوعية وكفاءة و جودة الخدمات الصحية في مؤسسات الرعاية الصحية والذي يعتبر ضماناً للجودة و سلامة المرضى و مقدمي الرعاية الصحية.

إن الهدف العام من هذه الدراسة هو تقييم نظرة التمريض لعملية الاعتماد الدولي JCI وتأثيرها على سلامة المرضى وجودة الرعاية الصحية في مستشفى المُطَّلَع، إذ تعتبر هذه الدراسة الأولى من نوعها في فلسطين. كما و تهدف هذه الدراسة أولاً: الى تقييم نظرة التمريض نحو تأثير الحصول على شهادة الإعتماد الدولي للجودة على جودة الرعاية المقدمة للمرضى و سلامة المريض في مستشفى المُطَّلَع. ثانياً: لتقييم العلاقة بين نظرة التمريض نحو تأثير الاعتماد الدولي للجودة على سلامة المرضى وجودة الرعاية والعوامل الديموغرافية والتنظيمية المحددة.

تم توزيع إستبيان لجمع المعلومات على جميع الممرضين و الممرضات العاملين في الأقسام الداخلية و الخارجية في مستشفى المُطَّلَع. تم توزيع 125 إستبيان وطلب من التمريض وضع الإستبيانات المعبئة في ظرف مختوم و وضعه في صندوق مغلق مخصص لجمع الإستبيانات موجود على مدخل

المستشفى عند قسم الإستقبال. طلب من المشتركين في الدراسة عدم وضع أسمائهم أو القسم الذي يعملون فيه للمحافظة على خصوصية المشتركين في الدراسة. تم استخدام برنامج الرزم الإحصائية للعلوم الإجتماعية SPSS لتحليل البيانات.

كان معدل الاستجابة من المشاركين في هذه الدراسة 72.8% وكانت غالبية المشاركين من الذكور (60.4%)، والشباب أقل من 40 سنة من العمر ولديهم درجة البكالوريوس في التمريض. تم تدريب غالبية الممرضات و الممرضين (86.6%) من حيث برامج الجودة وبشكل رئيسي حول السياسات والإجراءات ضمن معايير و سياسات ال JCI . كانت النسبة المئوية نحو تأثير الاعتماد على نوعية الرعاية و جودتها (71%) وعلى سلامة المرضى كانت (77.5%)، مما يعكس حقيقة أن لديهم تصور إيجابي لتأثير الحصول على شهادة الإعتماد على الجودة و السلامة العامة للمريض. و أن إعتماد المستشفى قد أدى الى تحسين على مستوى المريض والموظفين والمستشفى بنسبة (74.25%). كما و كانت هناك علاقة إيجابية ذات دلالة إحصائية بين نظرة التمريض على أسس من العوامل التنظيمية ($\alpha \leq 0.05$) والتي تشمل التزام القيادة والدعم الإداري، تخطيط الجودة الإستراتيجي، واستغلال الموارد البشرية، وإدارة الجودة، واستخدام البيانات ومشاركة الموظفين، حيث كان أعلى ترابط إيجابي في القيادة والالتزام والدعم الإداري، وأدنى علاقة في استخدامات الموارد البشرية.

أظهرت الدراسة أن التمريض ينظر الى شهادة الإعتماد الدولي ال JCI كأداة جيدة لتحسين نوعية وجودة الرعاية الصحية وتعزيز للسلامة العامة للمرضى. لذا تحتاج مؤسسات الرعاية الصحية في فلسطين الى استراتيجيات لتعزيز أنشطة تحسين الجودة بما في ذلك التزام القيادة ببرامج الجودة وتوفير الدعم الإداري لذلك والتخطيط الاستراتيجي للجودة، استخدام الموارد البشرية بشكل فعال، وإدارة الجودة، واستخدام البيانات ومشاركة الموظفين من أجل تحسين نوعية الرعاية الصحية. إضافة الى ذلك، فإننا بحاجة للتأكد من وجود تحسين و تطوير في جودة الرعاية الصحية و سلامة المريض من خلال قياس مؤشرات جودة أخرى لها علاقة مباشرة مع المريض.

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List of Abbreviations

AHRQ	Agency for health Research and Quality
ANOVA	Analysis of Variance
AVH	Augusta Victoria Hospital
CAUTI	Catheter Associated Urinary Tract Infection
CCHSA	Canadian Council on Health Services Accreditation
CEO	Chief Executive Officer
CLABSI	Central Line Associated Blood Stream Infection
CSSD	Central Sterile Supply Department
ENT	Ear, Nose & Throat
I.O.M	Institute of Medicine
ICU	Intensive Care Unit
ISO	International Standardization Organization
JCAHO	Joint Commission Accreditation for Healthcare Organizations
JCI	Joint Commission International
JCIA	Joint Commission International Accreditation
KSA	Kingdom of Saudi Arabia
MoH	Ministry of Health
NGC	National Guidelines Clearing House
NHS	National Health System
IPSGs	International Patient Safety Goals
LWF	Lutheran World Federation
NABH	National Accreditation Board for Hospitals
NPSGs	National Patient Safety Goals
PSI	Patient Safety Indicators
SPSS	Statistical Package for the Social Sciences
SSI	Surgical Site Infection
USA	United States of America
VAP	Ventilator Associated Pneumonia
WHO	World Health Organization

Chapter One

1.1 Introduction

Augusta Victoria Hospital in East Jerusalem is a specialized center for oncology, kidney dialysis, general ICU and Geriatric services, and is the only radiotherapy center accessible to Palestinians and the only pediatric dialysis center in Palestine. The majority of patients are referred by the Palestinian Ministry of Health from the West Bank and Gaza Strip. In May 2013, Augusta Victoria Hospital (AVH) became the first Palestinian institution with multiple specialties and one of 800 health organizations worldwide to hold the accreditation from the Joint Commission.

The Joint Commission is the largest accreditation body in the United States, which is a joint between American Hospital Association and American Medical Association, and is usually sought by other countries through its international arm, the JCI. The Joint Commission International (JCI) is a non-profit, non-governmental organization, and the most prominent health care accreditor in the United States. The JCI accreditation is an international evaluation process used to assess and to improve the quality, the efficiency and the effectiveness of health care organizations and guarantees efficient and effective quality of patient care and patient safety. It is based on evidence based standards that focus primarily on the safety of the patients, quality of medical care, the safety of buildings and facilities, patients' rights, and administrative competencies (Joint Commission, 2014).

Augusta Victoria Hospital has reached an outstanding success in its achievement of the JCI accreditation. This great success comes from the belief of the hospital administration in the right of the Palestinian patients to get the best possible healthcare services, and that all hospital staff shall work hand-in-hand to achieve this goal.

Although several studies worldwide showed a significant positive relationship between hospital accreditation and improved quality of care and patient safety outcomes (Joint Commission, 2014). Still, there are no studies related to the impact of the JCI accreditation on the quality of care and patient safety in Palestine.

1.2 Problem Statement

The hospital accreditation process nowadays focuses on risk management and patient safety (Joint Commission, 2014). Patient safety is conceptualized as the avoidance and prevention of adverse outcomes or injuries stemming from the processes of health care. Patient safety management is the establishment of operational systems and processes designed to minimize the likelihood of errors and maximize the likelihood of intercepting errors when or before they occur (Al-Shammari, et al. 2015).

Quality management addresses safety issues in medication use, infection control, surgery and anesthesia, blood transfusions, restraint, fire, emergency management and staffing competencies (Talib, et al. 2011). Nurses today have many roles; In addition to meeting the needs of patients and serving as part of the health care team, nurses also play a key and vital role in meeting the Joint Commission's International Patient Safety Goals in such areas as medication safety, communication and patient safety. This role allows nurses to highly contribute to quality improvement by yielding desired patient outcomes and reducing the probability of undesired outcomes (Al-Qahtani, et al. 2013).

Augusta Victoria Hospital, as a leading cancer and dialysis center in East Jerusalem, has a strategic vision to improve the quality of care and is highly committed to the development and maintenance of the highest standard of diagnostic and clinical services provided to their patients and to the community. To achieve that, AVH is seeking to get the JCI accreditation which is based on improving the quality of care and patient's safety.

Nurses at Augusta Victoria Hospital provide high level of nursing care while attending to the most basic human and social needs of their patients. During the last few years, the Augusta Victoria Hospital expanded, adding new departments and developing the existing ones. The complexity of the nursing practice has increased and the nursing roles are expanded in order to respond to the new strategic, highly specialized services at the hospital and to maintain the high quality of care based on the JCI standards and evidence based practices. On the other hands, their perceptions towards the JCI accreditation process and its impact on the patients' safety and the quality of care are still unclear and not studied.

1.3 The Significance of the study

The role of the nurses is pivotal in the healthcare system. They are the front line caregivers and the backbone of the health service. Patients have the most contact with nurses, and nurses bear a critical responsibility in identifying, addressing, and representing the needs and interests of their patients (Al-Qahtani, et al. 2013).

The literature emphasizes on the fact that hospital accreditation and patients' safety are both important quality indicators of delivered healthcare. Strong evidence suggests that focusing on nursing would improve patient safety, and any focus on acute patient safety must include a focus on nursing (Almoajel, 2012).

Significant series of quality reports from the supervisors and quality officers on patient safety and the active role of nurses in the process of hospital accreditation at AVH has encouraged the researcher to evaluate and address the issue of patient safety and to assess the nursing perceptions towards the impact of accreditation on the quality of care and patients' safety at Augusta Victoria Hospital. On the other hand, The Joint Commission International will continue to monitor AVH for compliance with the most current JCI hospital standards on an ongoing basis throughout the three years accreditation cycle. Besides, understanding the nurses' perceptions will enhance the nursing compliance to the latest standards, and allows the nursing administration to recognize their needs- their strengths and their weaknesses- thus maintaining systems to develop their competencies that will empower them as a nursing task force and guide them in the process of developing proactive strategies for quality and safety improvements at Augusta Victoria Hospital.

1.4 Context of the Study

Augusta Victoria Hospital

Augusta Victoria Hospital (AVH) is a program of the Lutheran World Federated Department for World Service in Jerusalem (The LWF, 2013). The hospital was established after the 1948 war to care for Palestinian refugees.

After serving for many years as a secondary care hospital, AVH is now becoming a specialized center of medical excellence in oncology, nephrology, intensive care, surgical and geriatric. In addition to building complementary community programs that support these specialties by promoting screening, early detection, and health education; the hospital is committed to serve its patient and the community by providing the needed health and humanitarian services.

AVH now is the leading cancer and dialysis center in Palestine providing high quality health services for the population. It is considered as the first and only radiotherapy center and pediatric dialysis center in Palestine.

AVH is licensed for 170 beds and in 2014 the occupancy bed rate was 78.23% for a total of 48,544 days of hospital care (The LWF, 2013). The specialty departments that account for the majority of work at the hospital are:

- The Cancer Care Center
- The Hematology and Bone Marrow Transplantation Care Center
- The Dialysis Unit
- The Intensive Care Unit
- The Surgical & ENT Center
- The Diabetes Care Center
- The Specialized Center for Child Care
- The Skilled Nursing and Long-Term (Sub-Acute) Care Facility

These care centers provide specialized treatments that are not available in the majority of hospitals in Palestine. The hospital is now focusing much of its strategic efforts on establishing a palliative care facility as well as a care center for the elderly. This approach is in line with the hospital's overall strategy to establish health services otherwise unavailable to the Palestinian community and complements the existing services at the hospital (LWF, 2013).

Top management at AVH firmly believes that quality is a strategic business dimension that ensures the hospital's sustainability and continuing growth. In 2013 AVH established a new department for nursing development and education, this department was established as a response to AVH strategic plan for improving patient safety and quality of care through nursing empowerment and development. From the start, the department leadership decided to use competency based education as one of the most effective approaches in a hospital setting .

Towards improving quality of services at AVH, management is committed to the following key business principles:-

- Continuously improving and updating the quality management system.
- Focusing on meeting patients' satisfaction
- Enhancing employee involvement since they are the ones who produce quality.
- Providing suitable work environment that is safe, healthy, and convenient to all patients and employees.
- Decision making at AVH at the strategic and operational levels is driven by facts based on employee involvement.
- Continuous improvement through a planned approach for defining and implementing quality objectives and indicators at all related departments to ensure continual improvement in all hospital activities and services.

1.5 The purpose of the Study

The overall purpose of this study is to assess the nurses' perceptions towards the impact of JCI accreditation on the quality of care and patients' safety at Augusta Victoria Hospital.

1.6 Research Objectives

1. To assess nurses' perceptions towards the impact of JCIA on quality of care and patients' safety at AVH.
2. To assess the relationship between the nurses' perceptions towards the impact of accreditation on the patients' safety and quality of care and selected demographic and organizational factors.

1.7 Research Hypothesis

1. Nurses at Augusta Victoria Hospital have positive perceptions towards JCI accreditation and its impact on the quality of care and patient safety.
2. There is no significant difference between the demographic factors (*gender, age, years of experience, level of education and seniority level*) and nurses' perceptions towards impact of JCI accreditation on quality of care and patient safety.
3. There is no significant difference between the organizational factors (*leadership commitment & support, Strategic quality planning, Human resources utilizations, Quality management, use of data and staff involvement*) and nurses' perceptions towards impact of JCI accreditation on quality of care and patient safety.

1.8 Study Limitation

1. The researcher does not know the perspective of the nurses about patient safety and quality of care at AVH before the JCI initiative.
2. The study results will not be generalized to other hospitals or health care centers accredited by the Joint Commission, because it includes the nurses from AVH only.

1.9 Assumptions

1. The nurses are cooperative and informative.
2. The questionnaire used in this study is valid and reliable.
3. All nurses will fill in the questionnaire honestly and sincerely thus reflecting their true perceptions towards the JCI accreditation at Augusta Victoria Hospital.

1.10 Summary

In this chapter, the problem statement, significance of the study, the study purpose, objectives and assumptions were discussed. This study was conducted at Augusta Victoria Hospital in East Jerusalem with the aim of assessing the nurses perceptions towards the impact of JCI accreditation on the quality of care and patient safety.

Chapter Two

Literature Review

The researcher reviewed relevant literature related to the Joint Commission International Accreditation and its impact on the quality of care and patient safety, but unfortunately little has been reviewed regarding the perceptions of nurses and their role in the hospital accreditation process. It is also worth mentioning that the researcher found similar studies conducted in the Arab countries such as Lebanon, Saudi Arabia, Qatar and Jordan, but was unable to find similar studies conducted on the JCI accreditation and its impact on the quality of care in general and patient safety in particular within the Palestinian context.

2.1 Overview of the Joint Commission

The Joint Commission International (JCI) is the international branch of the Joint Commission, a non-governmental, not for profit organization, and the most prominent health care accreditor in the United States (The LWF, 2013). The Joint Commission experience in the United States has evolved since 1917, with the efforts of the American College of Surgeons to improve health care through the introduction of standards. With the help of international committees comprised of physicians, nurses, healthcare administrators, and public policy experts, the JCI has developed a set of international healthcare regulations and standards of practice for healthcare facilities and professionals that must be met, and continually upheld, in order to receive accreditation (Joint Commission, 2014).

The Joint Commission's mission is to improve the safety and quality of care for patients and all staff in health care settings through the provision of health care accreditation and related services such as education, consultation and evaluation that support performance improvement in health care. Their vision is that "All people always experience the safest, highest quality, best-value health care across all settings". JCI has significant name recognition internationally and has accredited hospitals in many countries and has assisted Ministries of Health in certain countries to develop quality evaluation systems such as setting the standards for patient care, maintaining a sentinel event database, establishing

National Patient Safety Goals and encouraging patients to take a role in preventing health care errors and incidents (Joint Commission, 2014).

2.2 Hospital Accreditation

Accreditation is a process in which the health care organization is evaluated through an external review mechanism which assesses the hospital compliance based on a set of predetermined national and international standards with the purpose of improving the safety and quality of health care (Miller, 2009). According to the Joint Commission (2014), hospital accreditation is designed to ensure a safe environment for patients and their caregivers, enhance efficiency, improve outcomes, increase patient satisfaction and reduce costs through standardized care. This accreditation offers quantifiable benchmarks for measuring quality and patient safety, the issue that will help to stimulate and demonstrate continuous improvement and excellence achievement among health professionals.

Hospital accreditation nowadays is used as a tool to guarantee the quality of care in health care organizations. It is generally viewed as a formal and legal process to assess and to determine whether the health institutions meet the predetermined quality standards that are based on evidence and best practices (El-Jardali et al, 2008).

The president and the chief executive officer of the Joint Commission highlighted three main benefits of accreditation (Joint Commission, 2014); first of all; it improves patients' quality of care. Secondly, it empowers the organization and its staff in the community, and thirdly it reduces the risks on patients and improves the risk management processes within the organization. He said: "Delivering the right treatment in the right way at the right time is a cornerstone of health care. By working collaboratively with health care leaders to identify evidence-based treatments and to measure hospital performance in delivering them, The Joint Commission has been able to track fundamental health care quality improvement over the past 12 years".

About 800 Hundreds of health care organizations worldwide have achieved the Gold Seal of Approval as JCI-accredited entities (Joint Commission, 2014). JCI has partnered with these organizations to support their excellent achievements and continues to work with these high-achieving organizations to help them maintain their accreditation, keep them up to date with new standards, and offer guidance on the continuous expectation of performance improvement (Nicklin, 2014).

Alkhenizan and Shaw (2011) conducted a systematic review of the literature about the impact of accreditation on the quality of health care services. The study reviewed the various organizations that perform accreditation and establish standards for healthcare delivery. The study showed that accreditation has been generally viewed as a desirable process to establish standards and work toward achieving higher quality of care.

In developing countries, the interest in accreditation is growing and the health care settings used accreditation as a tool to enhance safety and to improve the quality of health services provided. The Kingdom of Saudi Arabia (KSA) is considered one of the first Arab countries in attaining the accreditation for its health care organizations under the leadership of their Ministry of Health (Jaber, 2014).

According to the Joint commission (2014), there are 10 important pathways to JCI Accreditation for hospitals:-

1. Become familiar with JCI's accreditation standards, policies and procedures, then review the survey process guide, then share the information with the team. Nurses need to share more information than other health professionals because of their roles in overseeing care.
2. Perform a baseline assessment of the hospital's performance against the JCI standards. Conduct gap analysis, assign staff responsibilities and build an accreditation action plan.
3. Update the hospital policies and procedures according to evidence based practice.
4. Target improvements where needed through examining the challenges and start with the international patient safety goals (IPSGs), then assess the hospital risks for adverse events and remedy the challenges without delay.
5. Work with staff to overcome obstacles through maintaining a safety culture and empower them by training and continuous education in new policies and procedures.
6. Assess your readiness at the midpoint by preparing the staff for the mock survey and involve them in the areas that need improvement.
7. Continue training for sustainable change by keeping staff educated and motivated about improved procedures. Then complete the mock survey planning.

8. Evaluate and refine processes (monitor and adjust). Encourage staff to do corrections and build a cohesive spirit.
9. Use the mock survey to assess your hospital readiness to the real JCI inspection and plan corrections and take the necessary spot improvements based on the audit results.
10. Make final preparation for the survey and do necessary modifications based on the JCI survey recommendations.

2.3 Benefits of JCI Accreditation

According to the literature and previous studies, there are many benefits for the JCI accreditation for the health organizations, patients, health care providers and the community. These benefits are summarized in the following points:-

1. Helps to build a culture of patients' safety and strengthen patient safety efforts (Al-Awa, et al. 2011).
2. Promotes a quality and safety culture among the staff and within the organization (Al-Ishaq M, 2008).
3. Ensures good access to a quality and safety focused organization where patient's rights are respected and protected (Pomey, et al. 2001).
4. Strengthens community confidence in an organization's efforts to provide the highest quality health services (Devekar and Farrell, 2014).
5. Provides a marketing advantage in a competitive health care environment and improve the ability to secure new business and safe services (Joint Commission, 2014).
6. Helps to develop proactive strategies for risk reduction that assists the health care organizations to improve risk management, safety & quality of care, and reduce the cost of liability insurance coverage (Nicklin, 2014).
7. Supports the efficient and effective use of physical & human resources in health care services with minimal waste (Hyder, et al. 2010).
8. Provides a culture that enhances the continuous education and upgrading of staff competencies (competencies based education) to develop their skills, knowledge and attitude (Al-Qahtani, et al. 2013).
9. Helps to improve the recruitment process and increase the opportunity to attract the best health professionals and gain their loyalty and commitment to work (Joint Commission, 2014).

10. Provides practical tools such as the quality indicators to measure the organization's performance and to help them manage incidents and take appropriate corrective actions thus maintaining performance excellence and improving patients' health outcomes (Almoajel, 2012).
11. Contributes to increased job satisfaction among health professionals and supporting staff (Wagner, et al. 2012).
12. Significantly improves the quality of care provided to patients with heart attack, pneumonia, surgical care, venous thrombus-embolism, stroke and inpatient psychiatric cases through an effective pathways for diagnosis and treatment of such diseases (The Joint Commission's Annual Report, 2014).

According to Rawanda Ministry of Health (2012), accredited hospitals report significant improvements in leadership, infection prevention management, reduction of risks and medication errors, medical records management, clinical outcomes and staff competencies.

2.4 Quality of Care and JCIA

Quality of care is not a new concept for health care organizations. The Agency for Healthcare Research and Quality (AHRQ) in 2009 define the quality of health care as "the delivering of health care services in a way that is safe, efficient, timely, patient centered and in an equitable manner".

Al-Qahtani. et al (2013), mentioned other definitions of quality as "Customer satisfaction " and "meets or exceeds customer expectations. He also defined quality of care as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.

According to the World Health Organization (2006), the quality of care was one of the main common concerns of the decision makers in developed and developing countries regardless to the level of health care provided by them. The achievement of best practice and good outcome in health care requires the implementation of sound quality strategies when physical and human resources are limited.

According to the Institute of Medicine (1990), Quality is a complex notion and means different things to different people. It is essentially very simple; and it has been defined as "the degree of excellence in health care". This excellence in health care has many dimensions and should have the following characteristics:-

- Patient safety: Providing health care and services in a way that avoids harm to patients.
- Effectiveness: Providing health care services based on evidence best practice and scientific knowledge.
- Person centered: Providing care that is respectful and responsive to the individuals' needs and values.
- Timely: Providing care on time without any harmful delays.
- Efficient: Best use of human and physical resources with minimal waste.
- Equitable: Providing the same level of care and health services to all people regardless of their age, gender, religion, socioeconomic status or other personal characteristics.

Quality should then address different safety precautions and considerations in medication management & use, infection prevention & control, anesthesia & surgical procedure, invasive procedures, blood transfusions, restraint, general staffing competencies, fire and safety, medical equipment, emergency management and security (Almoajal, 2012).

The Joint Commission's goal is to upgrade the quality of care provided by health care providers, thus stressing on three main components of quality for improving risk management and patient safety in hospitals (Joint Commission, 2014) & (Al-Qahtani. et al, 2013). These components are: system control, system improvement and staff development. System Control means that the health care organizations should have a clear documented strategic plan, vision, mission, values and goals, work instructions, policy & procedures guidelines. System improvement means that they have to develop different methods for quality and patient safety improvement such as quality audits, indicators, surveys and benchmarking for quality assessment and evaluation. Staff development, means building staff competencies and improving their knowledge and skills through an effective educational system that uses competency based education and perform on the job training and evaluation.

According to Jaber (2014) improving health care quality and patient safety are currently high and on the top priority of the national health agenda. In the East Mediterranean Region, the quality of care is now prominent on health policy agendas of governments of several countries (El-Jardali et al, 2008).

According to AHRQ (2015), the principle of continuous quality improvement includes but not limited to:-

- Staff involvement in the process of quality improvement within the organization.
- Be concerned with all internal quality processes and views quality as the result of every process.
- Focuses on external and internal needs of the customers.
- Everyone in the organization should be accountable toward improving quality.
- Emphasis on the efficient use of physical & human resources with minimal waste.
- Requires good leadership to support quality improvements in the production systems.
- Develops good indicators and analysis system to measure the compliance in quality improvement.

According to the literature review in the research conducted by Jaber (2014); Donabedian developed a model of quality assessment and analysis, this model observing quality of care in terms of structure, process, and outcome. These terms are related to indicate that the appropriate structures and processes will lead to good health outcomes. The structure refers to the health setting where the process of care takes place and it includes physical and human resources such as medical equipment, technology, qualifications of health providers and the operation of the system within the organization. The process refers to the present of good medical and nursing care practiced rather than relying on the level of technology to achieve good care. This includes good communication skills with patients and their families and appropriate leadership among health professionals to manage the health care in an efficient and effective manner. The outcomes refer to the health Indicators that include recovery and restoration of function and survival such as patient complaints and their satisfaction level, morbidity and mortality rates, incidents of diseases, quality of life and compliance with the treatment and care plans. Al-Awa. et al (2011) mentioned in his research that accreditation is a process used to improve the quality, efficiency and effectiveness of a healthcare organization, including its structures, processes and outcomes for the purpose of producing higher quality health services in the safest environment.

2.5 Patient Safety and JCI

Patient safety emerges as a central aim and critical component of health care quality (Joint Commission, 2014). The term patient safety is now widely used but seldom clearly defined. Those involved with patient safety are often concerned with other quality care issues such as risk management and quality assurance.

Patient safety can at its simplest be defined as "the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the process of healthcare" (Wachter, 2008). Al-Qahtani. et al, (2013) defined safety as "the prevention of harm to patients". The World Health Organization (WHO) defined the Patient safety as "the prevention of errors and adverse effects to patients that are associated with health care".

In the fifty-fifth world health assembly conducted in May 2002 about the quality of care: patient safety was concerned with the incidence of adverse events as a challenge to quality of care, and recognized the need to promote patient safety as a fundamental principle of all health systems, WHO urged the Member States to:

1. Pay the closest possible attention to the problem of patient safety.
2. Establish and strengthen science based systems necessary for improving patients' safety and the quality of health care including the monitoring of drugs, medical equipments and technology.

Safety is what patients, families, staff and the public expect from the Joint Commission–accredited organizations. Joint Commission accredited organizations focus on eliminating systems failures and human errors that may cause harm to patients, families and staff. The ultimate purpose of The Joint Commission's accreditation process is to enhance quality of care and patient safety (Wagner, et al. 2012).

In 1997, the Joint Commission began including outcomes and other performance data into the consideration process. Information gained allowed the Joint Commission to develop National Patient Safety Goals to promote specific improvements in patient safety. The Goals highlight problem areas in health care and describe evidence based solutions. Examples include hand hygiene, identification of patient, prevention of patients' falls, reducing health care acquired infections, reducing pressure ulcers and improving hospital staff communication and handover system. In addition, the Joint Commission created a "do not use" list of abbreviations in 2004 to avoid acronyms and symbols that lead to misinterpretation (<http://www.jointcommission.org>).

Identifying sentinel events and analyzing the root causes has been a focus of Joint Commission since 1996; the first eight alerts were published in 1998. The Commission defines a sentinel event as "any unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. The health care facility experiencing the sentinel event is expected to complete a thorough root cause analysis, make improvements to the underlying processes and monitor the effectiveness of the changes and implemented an action plan. Although the cause of most sentinel events is human error, changes and modifications in organizational systems will reduce the likelihood of such errors in the future and protect patients from harm when human error do occur. Specific causes of sentinel events and the solutions that hospitals then used successfully to reduce risks are publicized annually by the Joint Commission International Accreditation for health Organizations. Alerts have included issues as varied as wrong site surgery, restraint deaths, wrong site radiation therapy, blood transfusion errors, medication errors and patient abductions (Joint Commission, 2014).

In 2002, the Joint Commission established its National Patient Safety Goals program and the first set of NPSGs was effective in January 1st, 2003. The NPSGs were established to help accredited organizations address specific areas of concern in regards to patient safety. The development and annual updating of the NPSGs is overseen by an expert panel of widely recognized patient safety experts, as well as nurses, physicians, pharmacists, risk managers and other professionals who have hands on experience in addressing patient safety issues in a wide variety of health care settings.

Joint Commission International (JCI) has developed international patient safety goals, adapted from the JCAHO's National Patient Safety Goals. Since January 2006, the JCI has been monitoring compliance among international hospitals to test the feasibility of the goals. The International Patient Safety Goals (IPSGs) are:-

- Correct patient identification.
- Improve effective communication among health professionals.
- Improve the safety of high alert medications.
- Eliminate wrong-site, wrong patient, wrong procedure surgery.
- Reduce the risk of health acquired infections including Central Line Associated Blood Stream Infection (CLABSI), Catheter Associated Urinary Tract Infection

(CAUTI), Surgical Site Infection (SSI) and Ventilator Associated Pneumonia (VAP) and Improve hand hygiene compliance.

- Reduce the risk of patient harm from falls.

JCI considered the IPGs as important standards for Accreditation and its implementation represents proactive strategies to reduce risk of errors and reflect good practice of health care. The Accreditation Decision Rules of the JCI consider compliance with IPGs as a separate decision rule for getting the accreditation (Joint Commission, 2014) & (Al-Qahtani, 2013) & (Al-Awa et al, 2011).

In 2005, JCAHO established an international Center for Patient Safety to collaborate with international patient safety organizations to identify, develop and share safety solutions, conduct joint researches and advance public policy changes.

According to Dunbar, et al (2014), accredited hospitals have an integrated approach to patient safety so that high levels of safe patient care can be provided for every patient in every care setting and service. Hospitals are complex environments that depend on strong leadership to support an integrated patient safety system that includes the following:

1. Safety culture which is the product of individual and group beliefs, values, attitudes, perceptions, competencies, and patterns of behavior that determine the organization's commitment to quality and patient safety (Joint Commission, 2014).
2. Validated methods to improve processes and systems
3. Standardized ways for interdisciplinary teams to communicate and collaborate
4. Safely integrated technologies

According to Cook, et al. (2007), Safety is a characteristic of systems and not of their components. Safety is an emergent property of systems. In order for this property to arise, health care institutions must develop a systems orientation to patient safety, rather than an orientation that finds and attaches blame to individuals. It would be hard to overestimate the underlying critical importance of developing such a culture of safety to any efforts that are made to reduce error. The most important barrier to improving patient safety is the lack of awareness of the extent to which errors occur daily in all health care settings and organizations. This lack of awareness exists because the vast majority of errors are not reported, and they are not reported because of personal fear from punishment and job

threatening, thus health care organizations should establish no punitive system and safe environments for reporting errors and incidents within the organizations.

The Institute of Medicine (I.O.M) Quality of Health Care in America Committee believes that a major force for improving patient safety is the intrinsic motivation of health care providers, shaped by professional ethics and accountability, norms, their expectations, and the interaction between factors in the external environment and factors inside health care organizations can also prompt the changes needed to improve patient safety. Factors in the external environment include availability of knowledge and tools to improve safety, strong and visible professional leadership, legislative and regulatory initiatives, and the actions of purchasers and consumers to demand safety improvements. Factors inside health care organizations include strong leadership and commitment for safety, an organizational culture that encourages recognition and learning from errors, and an effective patient safety program (Stelfox et al, 2006).

National patient safety Agency describes seven major steps that are needed to improve patient safety (NHS, 2004). These steps are:-

1. Building a safety culture that is open and fair for staff to report their incidents, mistakes and sentinel events.
2. Leading and supporting staff by establishing a clear and strong focus on patient safety throughout your organization.
3. Integrating risk management activity by developing systems and processes to manage risks that identify and assess things that could be wrong.
4. Promote reporting: Ensure your staff can easily report incidents locally and nationally.
5. Involvement and communication with patients and the public.
6. Learning and sharing safety lessons by encouraging staff to use root cause analysis to learn how and why incidents happen and how to take corrective actions.
7. Implementing solutions to prevent harm through changes to practice, processes or systems.

AL-Ishaq (2008) focused on the necessity to have a safety culture and proactive strategies to improve the safety of patient care. The presence of safety culture will help in providing a safe environment for the staff and their patients to report any incidents and errors

occurring in the health care setting and allows the leaders and managers to take the necessary corrective actions to prevent future errors and similar incidents. The main components of a safety culture is to have a strong management commitment to safety, empowerment of staff with high level competencies and training on safety, friendly & trustful environment, involvement & creativity, open lines of communication, reward system and the presence of job satisfaction.

The most important knowledge in the field of patient safety is how to prevent harm to patients. A first step to turning such a vision into reality is to insure that interventions and actions that have solved patient safety problems in one part of the world are made widely available in a form that is accessible and understandable and where the basis for replicating the success is made clear (<http://www.who.int/patientsafety/newsalert/WHO-final.pdf>).

2.6 Patient Safety and Quality Indicators

In 2001, the USA Congress responded to the IOM recommendation to create a National Center for Patient Safety by allocating \$50 million dollars annually for patient safety research to the Agency for Health Research and Quality (AHRQ), the lead federal agency for health care safety. The AHRQ organizes patient safety activities, provide grants to other organizations, serves as a clearinghouse (NGC) for safety information, and published guidelines for evidence based practice. The goal of the NGC is to provide health professionals and institutions, health plans and health care purchasers an accessible mechanism for obtaining objective clinical practice guidelines.

AHRQ developed a set of measures called Patient Safety Indicators (PSI) that screen billing diagnosis for adverse events and potentially preventable complications that patients sometimes experience while receiving medical care. Hospitals and health care providers track and analyze these events in an effort to prevent future occurrence and build a proactive system in health care.

According to the Joint Commission (2014). The Patient Safety Indicators include but not limited to the following areas:-

- Hand Hygiene: The indicator measures the compliance of staff with hand hygiene in the five moments as stipulated by the WHO initiative of hand hygiene.

- Health Care Acquired Infection: The indicator measures the incidence of Central Line Associated Blood Stream Infection, Catheter Associated Urinary Tract infection, Ventilator Associated Pneumonia and Surgical Site Infection per device days as a measure of Health Acquired Infection.
- High Alert Medication Use: The indicator measures the compliance of double checking the preparation and administration of high alert agents (such as chemotherapeutic agents) by two staff to improve the safety of high alert medication.
- Anesthesia and Sedation use: Indicator measures the frequency of using reversing agents for anesthesia and moderate sedation in the operating room and other invasive procedures outside the operating rooms as measured against the total number of general anesthesia and moderate sedations performed
- Patient Identification: the indicator measure the staff compliance in identifying patients based on three identifiers (Patient name, ID number and file number)
- Use of Blood & Blood Products: the indicator measures the compliance of blood utilization in a safe manner.
- Patient Falls: the indicator measures the risk of patient falls with or without injuries and the compliance of staff to prevent such incidents.
- Surgical Procedure (correct site, correct procedure and correct patient): the indicator measure the compliance with proper marking of surgical sites (where indicated) with proper identification of patients for the correct surgery.
- Patient Restrain: the indicator measures the staff compliance in implementing the restrain policy for irritable and agitated patients to protect them from injuries and trauma.

2.7 Nursing role in Hospital Accreditation

According to Al-Qahtani, et al (2013), nurses have a pivotal role in the health care system. They are working on the front lines of care and are considered as the backbone of the health service. Nurses are involved in evaluating patient safety practices to improve care delivery because they are exceptionally valuable members of the healthcare providers and in a unique position to care for patients, saving lives, promoting health and contributing to reducing costs. For this reason the researcher in this study chose nurses as a targeted population in his study in order to assess their perceptions towards the JCI accreditation and its impact on the quality of care and patient safety at Augusta Victoria Hospital.

Nurses play a very important role in the area of quality and safety in any health care organization. They have different responsibilities in shaping quality and safety through their expanding role as caregivers, educators, leaders, managers, advocators, advisors, supervisors, consultants, decision makers, team builders and....etc. They are at the center of the patient care and therefore are essential drivers of quality improvement (Liewellyn, 2014). As essential drivers for quality improvement, they need to develop certain competencies in the area of quality and safety; which include:

1. Understanding the concept of patient centered care and empowering patients to be full partners in their health care plans.
2. Developing their understanding in the management of data for efficient use of information in order to monitor the outcomes of health care and quality improvement processes.
3. Having good communication skills and understanding the importance of teamwork and teambuilding.
4. Having high awareness to risk management and the ability to develop proactive strategies to minimize risk of harm to patients and providers.
5. Having knowledge of evidence based practice and the ability to integrate the update evidence in patient care and clinical practice.
6. Having efficient and effective use of technology to support decision making and quality improvement.

Top management at every health care organization must acknowledge the extent role of the nurse in dealing with patients and their families, and in communicating with all departments in the hospital using different methods of communication including verbal, writing, phone, intranet, by person and even by body language. JCI considered the effective Communication as the second IPGs, and focused on the necessity to improve the effective communication skills among caregivers, clinical and non-clinical departments, services and staff members (Al-Qahtani. et al, 2013) & (Joint Commission, 2014).

According to Manzo. et al (2012), the nurse has a critical role and unique abilities as a team member. She/he assists the health care organization during the implementation and the monitoring of the process of accreditation. The nurses within the organizational structure are positioned to interact with all the areas of support; they are autonomous, responsible, leaders, managers and clinical auditors. The accreditation processes are

influenced by their actions, commitment and support. Therefore, their efforts towards quality improvements should be recognized and rewarded in order to motivate them to continue in the process of quality improvement. Supportive leadership is vital to successfully achieve the Joint Commission International Accreditation.

Safety science encompasses the realm of "non technical skills", which have been shown to have a significant impact on patient safety. Non-Technical skills are the cognitive and social skills that allow people working in critical environment to behave safely and effectively. These skills include: Teamwork and team coordination, communication, leadership, decision making, assertiveness, conflict resolution, coping with stress and fatigue, workload management, prioritization of tasks, situation awareness. These skills are needed for nurses and other health care professionals in order to participate effectively in the improvement of patient safety and quality of care in the health care organizations which in role facilitate the achieving of accreditation.

Schyve, the Vice president of the Joint Commission for Research and Standards, mentioned in his published book "the leadership in health care organizations 2009", that the quality and safety of care provided by nurses and other health care providers, depend on many factors; These factors are necessary to improve the quality of care and patient safety and therefore facilitate the implementation and achievement of hospital accreditation (Schyve, 2009).

The factors are:-

1. A culture of safety that strengthens the safety and quality nursing efforts.
2. Good planning to satisfy the patient's needs.
3. The availability and effective management of physical, human and financial resources.
4. Competent nursing staffing and other care providers.
5. Ongoing performance evaluation and competencies development.

2.8 Global Reviewed Studies

In Lebanon, El-Jardali, et al (2008) conducted a cross sectional study on 1048 registered nurse from 59 hospitals to assess their perceptions toward the impact of hospital accreditation on the quality of care. The overall response rate was 75.5%. The study

showed that the quality results (dependent variable) were positively correlated with other independent variables which include: leadership commitment and support, quality management, human resource utilization, use of data, staff involvement and strategic quality planning. The conclusion of the study findings showed that the Lebanese nurses perceived an improvement in quality of care during and after the process of accreditation and that accreditation was used as a good tool for quality improvement. Another research conducted in France by Pomey, M et al (2001), concluded that Accreditation was a good tool for positive organizational change and continuous quality improvement in hospitals. On the other hands, the potential of JCI in improving quality practices is dependent on the implementation approach.

Diab (2011) conducted a statistical descriptive study in the Jordanian private hospitals to understand their accreditation standards and to assess the differences in the perception of doctors and nurses toward these accreditation standards. 300 nurses and 300 doctors from a total of 62 private hospitals participated in this study, 52% male and 48% female. The study showed that both nurses and doctors have positive perception toward accreditation, and there was no difference in their apperception about the accreditation standards related to quality management, human resources utilization, strategic planning, use of data and their leadership, commitment and support.

In the Kingdom of Saudi Arabia at King Abdul-Aziz University Hospital Al-Awa, et al. (2011), conducted a study to assess the impact of accreditation on the patients' safety and quality indicators as perceived by staff nurses. The researcher used a cross sectional surveys design to do the comparison of patient safety and quality of care indicators between the pre and the post accreditation periods. Retrospective and prospective study design was also used. The study showed that post accreditation, the overall average of improvement in the quality of care and patient safety at King Abdul-Aziz Hospital was 34.57%.

Another research was conducted in the Kingdom of Saudi Arabia in King Khalid Hospital in Hail city (Al-Shammari, et al, 2014). This study was conducted to investigate the perception of nurses toward the impact of JCI accreditation on patient safety related to nursing documentation, HCAIs (CAUTI, CLABSI, SSI and VAP) and patient medication information. A descriptive cross sectional design was used, and self administered questionnaire was distributed to 260 nurses working at King Khalid Hospital. The response

rate was 76%. SPSS version 18 was used for data analysis and the overall mean of all items in the questionnaire was 4.17 ranging between agree and strongly agree in the questions related to the impact of accreditation on nursing documentation (Mean = 4.12), patient medication information (Mean = 4.05) and health-care associated infections (Mean = 4.34). This means that the results showed that nurses have a positive perceptions toward the impact of accreditation on patient safety.

In Abu Dhabi in the private hospital of 150 beds (multispecialty acute care hospital) Devkaran and Farrell (2014) conducted a case study research. The purpose of the study was to assess the impact of hospital accreditation on clinical documentation compliance and quality measures using interrupted time series analysis. The researcher observed the impact of hospital accreditation on the 23 quality measures. Each month for a total of 48 months (one year before accreditation and three years' post accreditation) a simple random sample of 24% of patients' records was audited, resulting in 276,000 observations collected from 12,000 patients' records that were drawn from 50,000 of the total population. The study showed improvement in the compliance of clinical documentation post and during the accreditation.

Tavrow, et al. (2002) conducted a prospective randomized control study to assess the impact of hospital accreditation on public hospitals' processes and outcomes in KawZulu-Natal Province, Republic of South Africa. The study was designed to evaluate the impact of accreditation program on the quality of care at 53 public hospitals. The analysis of the results using Chi-square, correlations and ANOVAs provided clear evidence that hospitals participating in the accreditation program significantly improved in their compliance with the accreditation standards and improvement in quality indicators with better hospitals' outcomes.

Dunbar, et al (2014) explored the perceptions of Australian General Practice Accreditation Surveyors toward the impact of hospital accreditation on patient safety in Australian hospitals. The researchers conducted semi-structured telephone interviews with 10 surveyors for about one hour. These interviews were recorded and then summarized to conclude that accreditation has significantly enhanced improvement in the quality of care and safety. At the same time, they highlighted specific areas that need more attention in issues related to risk management of Australian general practices.

Al-Qahtani, et al (2012) conducted a cross sectional study to compare the level of the quality of health care services provided by accredited and non-accredited hospitals. The study focused on the patients' satisfaction and their perceptions about the quality of care provided to them in the obstetrics and gynecology clinics in the Eastern Province of Saudi Arabia. The study includes the female patients in the antenatal care clinics and the female inpatients who gave birth at the selected settings. The response rate for the study was 91%. The results of the study showed that the female patients at the accredited hospital were more satisfied and happier with the quality of health services and care performance than patients at the non-accredited hospital. And the patients had higher satisfaction at the inpatients than at the outpatients in both accredited and non-accredited hospitals.

Woher (2012) conducted a study in Kameda Medical Center in Japan to assess the perception of the Japanese nurses towards the impact of JCI accreditation on the quality patient care and to assess their level of understanding to the goals of JCI accreditation. The survey questionnaire consisted of 5 questions was distributed to the nurses working at Kameda Medical Center in Japan. Quantitative and qualitative approaches were used in this study. The study showed that the nursing staff believed in the positive impact of JCI accreditation and consider it as a major tool for improving the quality of care.

Wagner, et al (2012) conducted a comparison study between JCI accredited Nursing Homes and non-accredited Nursing Homes to assess the impact of joint commission accreditation on the residents' safety culture from the perception of the nursing directors and the nursing home administrators in the United States. The Nursing Home Survey on Resident Safety Culture was distributed to 6,000 Nursing Homes selected from 50 states in USA. The response rate was 67%. From 4,008 returned questionnaire from the directors of nursing and nursing homes administrators, 523 were from JCI accredited nursing homes and 3,485 from non- accredited nursing homes. t-test was used to analyze the data and the results showed that nursing homes with JCI accreditation were associated with a more favorable resident's safety culture on the items related to feedback and communication about incidents, reporting of sentinel events, teamwork & staffing level, participation of frontline staff in decision making and the non punitive response to mistakes.

Another study conducted in the state of Qatar (Al-Ishaq, 2008) to assess the perceptions of nurses towards the safety culture at Hamad Medical Hospitals. A non-experimental, cross sectional design was used. 800 surveys were distributed through the hospital mail to all

nurses working at Hamad Medical Hospital. The total response rate was 57%. The study was analyzed using the SPSS and the results showed that safety culture was an important step toward proactive improvement in patient and staff safety where errors and incidents may be hidden for fear of negative consequences.

Manzo, et al (2012) conducted a qualitative descriptive case study in a private hospital of Belo Horizonte in Brazil to evaluate the nurses role and their influences in the hospital accreditation process. Data collected through semi-structured interviews with 15 nursing technicians and 9 general nurses. The study discussed two aspects for nursing. The first aspect is related to the role of nursing staff in the process of accreditation; the second is related to the implications of the accreditation process for the nursing team. The results showed that nurses have an important role in the accreditation process which involves providing care, administrative, educational and research issues. On the other hands, the study showed the positive and negative perceptions of nurses toward the accreditation. The positive aspects were related to the nursing pride of their role, professional maturity and upgrading. The negative perceptions were related to the lack of recognition from their seniors including the financial incentives, the workload and pressure imposed by their bosses to implement the accreditation without sensitization of the professionals.

Hyder, et al (2010) conducted a comparative study to assess the perception of leaders and managers towards the impact of accreditation on human resources development and management in hospitals accredited by three different agencies including CCHSA, JCI and NABH. The study was conducted in three hospitals by distributing a survey (questionnaire) that include different categories: Patient needs assessment, human resource planning, staff qualification and competencies, performance evaluation, staff development and other indicators related to human resources, management and quality improvement. The study results showed that there is a significant difference in the implementation of accreditation and in the perceptions of managers towards these accreditation agencies. This was clear in the values that got the highest rating in the survey for JCI accredited hospitals when compared to the other two hospitals accredited from the CCHSA and NABH.

French National Authority for Health (2010) conducted an international literature review study by reviewing 56 studies conducted in the national and international agencies in different 16 countries. The main purpose of this study was to produce an overview of the results and methodologies used to assess the impact of hospitals accreditation and to assess

the impact of accreditation on the quality of care and patient safety in the reviewed studies. The literature searched from the period of 1st of January/2000 to 31 August/2010. The researcher used different databases and websites of national and international accreditation agencies. The majority of reviewed studies showed positive staff perceptions towards accreditation and suggested that accreditation procedures in hospitals have a positive impact on improving organization, management and general professional practice. The main studies showed a positive relationship between accreditation and improvement in the quality of care, patient safety and other health outcomes including patient and staff satisfaction. Only few studies highlighted some negative impact of accreditation such as increased workload.

Almoajel (2012) conducted a systematic review of literature study using the Medline data base to review 23 studies in the duration from January 2005 to January 2011. The main objective of the study was to assess the relationship between the hospital accreditation and its impact on quality indicators. The literature review of these studies showed that quality indicators are essential for hospitals to improve the quality of health care services and that these indicators are necessary to go through accreditation.

Jaber (2014) conducted a quantitative study for the purpose of assessing the perception of 353 nurses towards the impact of JCI accreditation on the quality of care. The study was conducted in two different hospitals in Saudi Arabia in Riyadh city. A cross sectional design was used in which the self administered questionnaire was used for data collection from one accredited hospital and another non-accredited hospital to compare the data between both hospitals. The response rate was 66.6% in the accredited hospital and 65% in the non accredited hospital. The results showed that accreditation significantly improved the quality of care, enhance of teamwork and effective utilization of human resources. Furthermore, the leadership, commitment and support from the top management, in addition to the strategic quality planning, quality management and effective use of data are important factors to ensure a successful quality improvement implementation.

2.9 Summary

This chapter presented the theoretical background and international studies and researches that have discussed the impact of the hospital accreditation on the quality of care and

patient safety, and showed the perception of nurses toward the accreditation and its impact on quality improvement.

Chapter Three

Conceptual Framework

3.1 Introduction

This chapter includes the conceptual framework, the conceptual and operational definitions of the dependent and independent variables, and the methods used for measuring the study variables.

3.2 Conceptual Definitions

1. Nursing Perceptions: - Is the set of processes by which nurses become aware of and interpret information about their surrounding environment (Business Dictionary, 2015)
2. JCI Accreditation: - Joint Commission International Accreditation is the international branch of the Joint Commission, a non-profit, non-governmental organization, and the most prominent health care accreditor in the United States (Joint Commission, 2014).
3. Demographic Factors: - Are socioeconomic characteristics of a population expressed statistically, such as age, sex, education level, marital status, occupation, religion, birth & death rate, average size of a family, average age at marriage (Business Dictionary, 2015).
4. Organizational Factors: - Are strong leadership; management provides adequate funding, ensures availability of technology/personnel, allows the champion to function throughout the development process which includes:- user participation in the process, organizational politics, organizational climate, user readiness (Business Dictionary, 2015).
5. Patient Safety: - Is the prevention of errors and adverse effects to patients associated with health care (Al-Qahtani, et al. 2015).
6. Quality of Care: - The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge (Al-Qahtani. et al, 2013).

3.3 Operational Definitions

1. Nursing Perceptions: - the assessment of nursing knowledge, awareness and competencies in relation to the JCI standards and its impact on the quality of care and patient safety at AVH. The researcher used a valid and reliable tool that was used in previous studies to assess the perception of nurses at AVH towards the impact of JCI accreditation on the quality of care and patient safety.
2. JCI Accreditation: - an internationally recognized evaluation process used to assess, promote and guarantee efficient and effective quality of patient care and patient safety at AVH. A copy of the JCI accreditation certificate is attached with this research to show that AVH is a JCI accredited hospital.

Benefits of JCI accreditation is measured through assessed the statements from B (49) to B (54) in the attached questionnaire that assessed the extent in which the accreditation benefits the patients, the staff and the hospital.
3. Demographic Factors: the independent variables including age, gender, level of education, years of experience and seniority level of nurses at Augusta Victoria Hospital. Statements from A (1) to A (5) in the attached questionnaire.
4. Organizational Factors: Are the independent variables including workload and the quality improvement activities (leadership commitment & support, quality training, staff involvement, strategic quality planning, quality management, use of data) at Augusta Victoria Hospital.
 - Workload at AVH is measured through a scale from one to ten and the nurses were asked to rate the workload in the units they work in. Statement A (9).
 - Quality training is assessed through questions related to the staff training in quality, the period of training and the subject or type of the training they get. Statements from A (6) to A (8).
 - Quality improvement activities:
 - Leadership/Commitment and Support: Nine statements from B (14) to B (22) to assess the extent to which the senior hospital executives guided, created and sustained a supportive environment for quality improvement.
 - Strategic Quality Planning: Six statements from B (23) to B (28) to assess the efforts done to develop strategic objectives, and action plans and the extent to

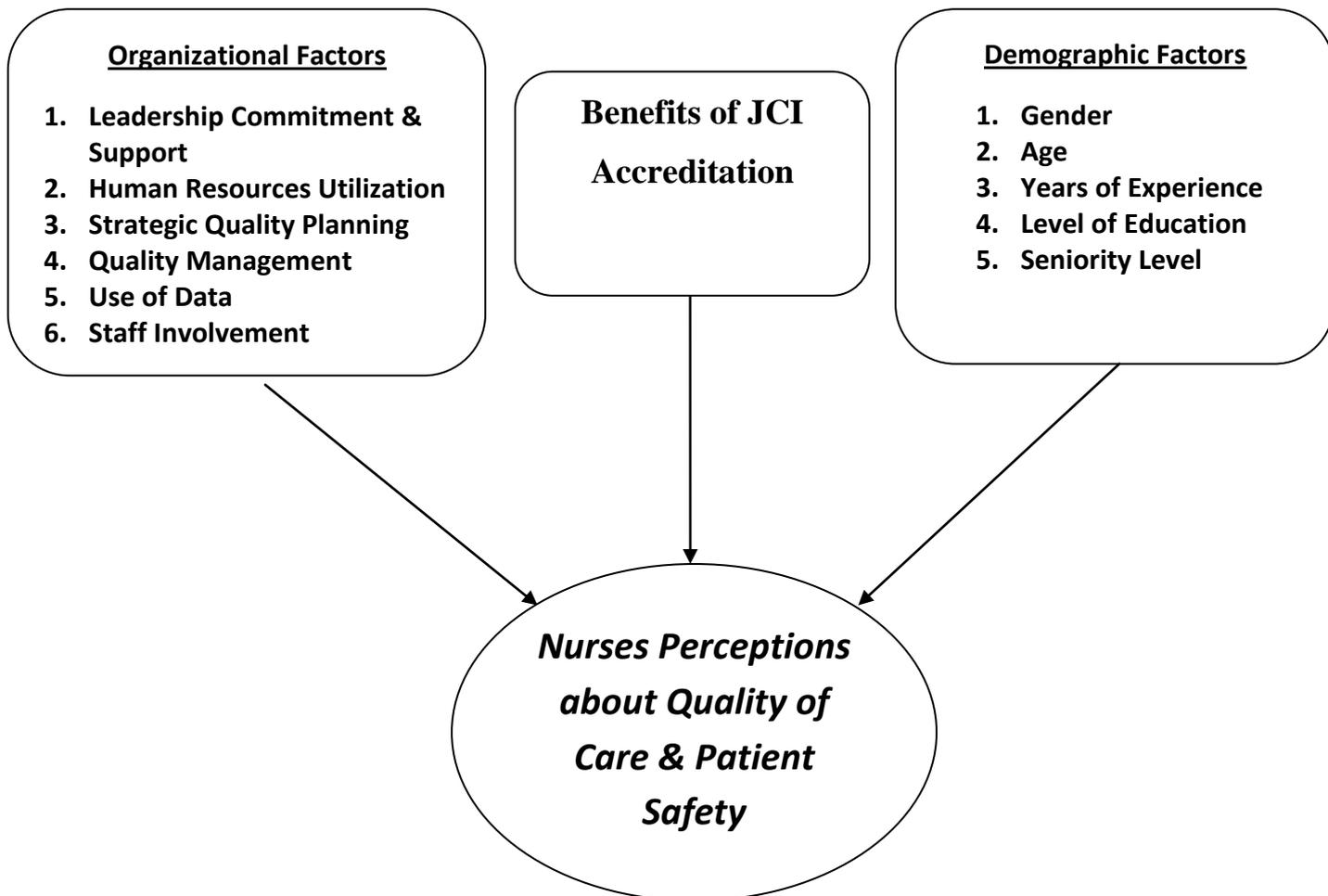
which nurses were empowered and involved in the hospital quality planning processes.

- Human resources utilization: Six statements from B (29) to B (34), which assessed the extent to which nurses were provided adequate education and training to support quality improvement, and the extent to which nurses were rewarded and recognized for their efforts and participation in quality and safety improvement at AVH.
 - Quality Management: Five statements from B (35) to B (39) to assess if the hospital viewed quality improvement as a continuous search for ways to improve.
 - Use of Data: Five statements from B (40) to B (44) to assess if the hospital manages and use data in a way that help improve the quality of services provided to patients and improve the patients' satisfaction.
 - Staff Involvement: Four statements from B (40) to B (44) to assess the level of nursing involvement in the JCI accreditation and in the changes that resulted from the implementation and the recommendations.
5. Quality of care:- In this study, the quality of care is the dependent variable and is defined as the delivery of safe, effective, efficient and equitable care and services to all patients at AVH following standard policies and procedures. This will be measured and assessed through the review of the quality results in statements from B (1) to B (5) that assessed the extent to which the hospital had shown measurable improvement in quality in different areas at AVH:-
- The quality of customer satisfaction.
 - The quality of services provided by the administration (finance & human resources...etc).
 - The quality of care provided to patients in oncology, nephrology, surgical, ICU and geriatric units.
 - The quality of services provided by clinical support departments such as laboratory, pharmacy and radiology.
6. Patient Safety:- Is the dependent variable that include the perception of nurses about the improvement of patient safety at AVH. Eight statements from B (6) to B (13) including the following areas:
- Patient Satisfaction: B (7)

- Health Care Acquired Infection: B (8)
- Medication Use: B (9)
- Transfusion of Blood and Blood Products: B (10)
- Code blue performance: B (11)
- Hand Hygiene: B (12)
- Patient Falls: B (13)

3.4 Conceptual Framework

The framework developed was based on the literature reviewed, and it includes factors related to the demographic data, the organizational factors, the benefits of JCI accreditation and how these factors might impact the perception of nurses towards improvement in quality of care and patient safety at AVH.



3.5 Summary

The chapter presented the conceptual framework of the study, as well as the variables of the conceptual and operational definitions of the study. There are some factors that might affect the perceptions of nurses towards the impact of JCI accreditation on the quality of care and patient safety at AVH; such factors are age, gender, years of nurses' experience and their level of education. Moreover, organizational factors may also have an effect on their perceptions towards improvement in quality and patient safety.

Chapter Four

Methodology

4.1 Introduction

This chapter describes the study methodology which includes: the study design, the target population, the data collection instruments, and data statistical entry and analysis. Moreover, ethical considerations and a summary of pilot study are highlighted.

4.2 Study Design

The design of this study is a quantitative descriptive cross-sectional design. A questionnaire was used to assess the nurses' perceptions towards the impact of JCI accreditation on the quality of care and patient safety at Augusta Victoria Hospital.

This design is simple, easy and quick to conduct, it allows the researcher to compare many different variables at the same time without loss of follow up, and help to test the study hypothesis.

4.3 Study Population

The total population of the nurses working in the in-patient and out-patient departments at Augusta Victoria Hospital in East Jerusalem was targeted in this study (Table 4.1).

Table (4.1): Distribution of nurses in the inpatient and outpatient departments at AVH

No	Nursing Departments	Frequency of Staff nurses	%
1	Medical Oncology	15	12%
2	Hematology Unit	12	9.6%
3	Pediatric Oncology	15	12%
4	Adult Chemotherapy	12	9.6%
5	Dialysis unit	16	12.8%
6	Surgical Unit	12	9.6%
6	Operating Room & CSSD	10	8%
7	Intensive Care Unit	13	10.4%
8	Outpatient Radiotherapy	2	1.6%
9	Geriatric	18	14.4%
	<u>Total</u>	125	100%

4.4 Sampling Techniques

Since the research was conducted at Augusta Victoria Hospital, and the total number of nurses working at the hospital is (125) who actively participated in the process of JCI implementation and accreditation and had experience above 2 years at AVH, the researcher targeted all nurses in his study due to the small size of the population. The exclusion criteria included the nursing students and new nurses who had not completed 2 year at work at the time of the study in order to ensure that the participant nurses had spent enough time in the hospital to be confident in completing the questionnaire.

4.5 Study Instrument

A questionnaire to assess the nursing perceptions towards the impact of JCI Accreditation on the quality of care and patient safety, was adopted and developed in accordance to the tools and validated questionnaires used in the previous studies (Jaber, 2014) and (El-Jardali. et al, 2008), and then modified by the researcher as appropriate to suit the nurses' expectations at Augusta Victoria Hospital.

The questionnaire consists of two parts:

1. Part one; included the demographic & personal factors of the respondents and some organizational factors.
2. Part two; consisted of 54 questions that were divided into 8 domains and rated on a five-point Likert scale ranging from one for strongly disagree to five for strongly agree. The dependant variables were the quality results (5 questions) and patient safety results (8 questions), whereas the independent variables were leadership, commitment and support (9 questions); strategic quality planning (6 questions); human resource utilization (6 questions); quality management (5 questions); use of data (5 questions); and staff involvement and benefits of accreditation (10 questions).

4.6 Validity of the Instrument

The validity of the instrument means that the instrument measures what it is supposed to measure and what it is designed for. The content validity is the degree to which the items in an instrument adequately represent the universe of the content. Content validity is based on in the extent to which a measurement reflects the specific intended domain of content (Polit, 2006).

The researcher asked three persons experienced in the field of quality and patient safety to judge the questionnaire; they reviewed the questionnaire and gave fruitful comments to the researcher for modifying and enriching the questionnaire used in this study. Items were modified based on the experts' recommendations.

The validity of the study measured the dependent variables (quality results and patient's safety results). Table (4.1) below shows the results of the Person Correlation Test.

Table (4.2): Person correlation result for the quality results and patients' safety results with the total degree.

Variable (Quality Results)	Value (r)	Significant value
1. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of customer satisfaction.	0.671	0.001
2. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of services provided by the administration (finance, human resources, etc.)	0.733	0.001
3. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of care provided to patients (medical, surgical, oncology, nephrology, ICU and geriatric patients).	0.655	0.001
4. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of services provided by clinical support departments such as laboratory, pharmacy and radiology.	0.471	0.001
5. Over the past 2 years, the hospital has maintained a high quality health services utilizing the available financial constraints.	0.542	0.001
Variable (Patient Safety Results)	Value (r)	Significant value
6. Accreditation enables the improvement of patient safety at your hospital.	0.720	0.001
7. Accreditation increases the measurable improvement in the patient satisfaction.	0.731	0.001
8. After accreditation the rate of hospital acquired infections has significantly reduced.	0.755	0.001
9. Accreditation improved medication use and reduced medication errors/incidents	0.754	0.001
10. Accreditation notably lowered the rate of blood transfusion reactions	0.712	0.001
11. Accreditation increases the rate of successful code blue performance within the hospital departments.	0.750	0.001
12. There is an increase in the rate of hand hygiene compliance among hospital staff after accreditation.	0.382	0.001
13. Accreditation significantly decreased the incidents of falling down among patients.	0.369	0.001

It seemed from the table above that all values were related with the total degree of the study, and this mean that there is an inner consistency for the items.

4.7 Reliability of the Instrument

In this study, Chronbach's Alpha reliability coefficients were calculated and showed to be exceeding (0.8) for all domains and items in the questionnaire, providing evidence of reliability and internal consistency. All dimensions were shown to have acceptable levels of reliability coefficient measuring.

Table(4.3): Chronbach's Alpha results for the reliability of the study

Domain Name	Number of items	Alpha Value
Quality Results	5	0.824
Patient Safety Results	8	0.882
Leadership commitment and support	9	0.920
Strategic Quality Planning	6	0.887
Human Resources Utilizations	6	0.861
Quality Management	5	0.856
Use of Data	5	0.892
Staff Involvement	4	0.910
Benefits of Accreditation	6	0.953

4.8 Pilot study

A pilot study was conducted on a group of 10 nurses from Al-Makassed Hospital in East Jerusalem. This hospital got the JCI accreditation and the researcher used the pilot study in order to verify the clarity of the tool, and the visibility for the data collection method.

- The aim of the study was explained to each participant prior to data collection.
- Based on the results of the pilot study, the researcher modified the questionnaire.

4.9 Permission and Ethical considerations

An official letter was obtained from Al-Quds University to allow the researcher to carry out the study at AVH. An approval letter from the general director was obtained to facilitate data collection procedures at Augusta Victoria Hospital. An Informed consent related to the purpose and objectives of the study was added to the questionnaire.

An informed consent was obtained from the nurses at AVH and they were assured that their participation in the study was voluntary and confidential and that their feedback will not affect their work evaluation, work status, or their salary.

4.10 Data Collection

The receptionists supervisor at AVH, distributed the questionnaire in closed envelop for the head nurses at every department. The data was collected after getting the consent from each nurse in the hospital.

The nurses were asked to put the filled questionnaires in sealed envelope in a special box labeled research questionnaire at the reception area in AVH without putting their names or the department they work in.

4.11 The Data Entry and Analysis

The researcher entered the whole data using the Statistical Package of Social Sciences (SPSS version 18), and the data of 91 completed questionnaires from a total of 125 were analyzed. The response rate was 72.8%. The researcher analyzed the data with the help and support of a statistician. Frequencies, means, SDs besides ANOVA and correlation test were used for data analysis.

4.12 Summary

This chapter provides an overview of the methodology which was used in this study, describing the study design, the targeted population, data collection and analysis processing using SPSS version18.

Chapter Five

Results

5.1 Introduction

This chapter presents the study results including the demographic characteristics of the respondents and the quality training they received. Additionally, the chapter presents respondents' perceptions towards the impact of accreditation on quality of care and patients' safety. Moreover, the relationship between the nurses' perceptions towards the impact of accreditation on the patients' safety and quality of care and selected demographic factors such as age, gender, years of experience, seniority level and the level of education. Organizational factors such as leadership, commitment and support, strategic quality planning, utilization of human resources, use of data, workload, staff training and involvement in JCI will also be presented.

5.2 Characteristics of Respondents

All nurses working at Augusta Victoria Hospital were targeted for participation in this study. A total of 91 participants returned the completed questionnaire out of 125. The overall response rate was 72.8%. Table (5.1) shows the respondents characteristic.

Male respondents were (60.4%) and the female respondents were (39.6%), thus indicating that the majority of nurses at AVH are males. The age of the respondents ranged from 22 to 57 years with a mean age of 33. The majority (48.3%) were young nurses less than 30 years, the others were (33%) between 30 and 40 years, and only (18.7%) above 40 years, thus indicating that AVH depends on the young generation of nurses to carry the nursing activities within the hospital. The majority of respondents (44%) had less than 5 years experience, and (16.5%) between 5 to 10 years, while only (39.6%) had experience above 10 years. The majority (74.7%) had Bachelors degree, and (7.7%) had diploma, while (6.6%) post graduate diploma and (11%) with master's degree. This indicates that AVH supports the process of continuous education for nursing and facilitate their upgrading and development. Of the 91 participants, the majority (79.1%) are working as staff nurses and

many of them take a specific role beside their roles in nursing; such as infection control officers, clinical resource nurses, patient and family right officers and quality officers.

Table (5.1) Respondents' Characteristics

Section (A)	Frequencies and percentages
Respondents Characteristics	Total: 91
Gender:	
<ul style="list-style-type: none"> • Male • Female 	55 (60.4%) 36 (39.6%)
Age:	
<ul style="list-style-type: none"> • Less than 30 yrs • From 30 - 40 yrs • Above 40 yrs 	44 (48.3%) 30 (33%) 17 (18.7%)
Years of Experience:	
<ul style="list-style-type: none"> • Less than 5 yrs • From 5 - 10 yrs • From 11 - 15 yrs • Above 15 yrs 	40 (44%) 15 (16.5%) 11 (12.1%) 25 (27.5%)
Educational Level:	
<ul style="list-style-type: none"> • Diploma Degree • Bachelors of Science • Higher Diploma • Master's Degree 	7 (7.7%) 68 (74.7%) 6 (6.6%) 10 (11%)
Occupational Category:	
<ul style="list-style-type: none"> • Practical Nurse • Staff Nurse • Head Nurse • Supervisor 	7 (7.7%) 72 (79.1%) 10 (11%) 2 (2.2%)

Table (5.2) shows the respondents distribution according to quality related training. The majority of respondents (86.8%) were trained in quality, thus indicating that the Augusta Victoria Hospital invested a lot in nursing education and only (13.2%) of the respondents did not get any training related to quality of care. The majority of training (70.9%) was held for more than one week, (21.5%) from one to three weeks and (49.4%) for more than 3 weeks. The most important topics that were covered in these trainings are as follows: The

majority of the training was about policies within the JCI standards (82.3%) and this is because the AVH is a JCI accredited hospital. Then in infection prevention and control (59.5%), and in patient safety (41.8%). Only (11.4%) on topics related to team building and team work in spite of the necessity for such topics to help staff in the process of implementing and achieving the JCI accreditation.

According to the human resources department and the nursing education and development department at AVH, the total number of study days given for nurses in the year of 2015 either as in-service training or external training is exceeding 1500 study days.

Table (5.2) Nursing Participation in Quality training

Section (A) Quality Training	Frequency and percentages Total: 91
Training related to Quality: <ul style="list-style-type: none"> • Yes • No 	79 (86.8%) 12 (13.2%)
Period of Training: <ul style="list-style-type: none"> • Less than one week • One to three weeks • More than three weeks 	From a total of 79 participants who got the training: 23 (29.1%) 17 (21.5%) 39 (49.4%)
Type of Training <ul style="list-style-type: none"> • ISO • JCI • Patient Safety • Infection Control • Team Building • Leadership & Change management 	From a total of 79 participants who got the training: 18 (22.8%) 65 (82.3%) 33 (41.8%) 47 (59.5%) 9 (11.4%) 25 (31.6%)

In the analysis of the question A (9) that is related to the workload in the nursing departments, the results show that the majority of participants (82.8%) were under extensive work load and (17.2%) were under moderate work load. This work load may be related to the specialty of the hospital, since AVH is a specialized cancer care center and the only radiotherapy center in Palestine that provide cancer services to patients from West Bank and Gaza Strip.

5.3 Quality and Safety results as perceived by participants

The nursing perceptions toward improvement in the quality of care and patient safety were assessed through using the descriptive statistics and by calculating the frequencies, mean, standard deviation and the percentage of mean score for each item in every domain and then by calculating the overall score and percentage of mean score for each domain. The perception of nurses were classified into positive, neutral and negative perceptions based on the percent of responses that were answered by participants.

Definition of positive, neutral and negative perception:

1. Positive perception: is the percent of responses that were answered (Agree/Strongly agree) for positively worded items and considered as an area of strength when the percent is above 70% according to the Agency for Healthcare Research and Quality.
2. Neutral perception: is the percent of responses that were answered neutral for all items or when the percent is between 50% and 70%.
3. Negative perception: is the percent of responses that were answered (Disagree or strongly disagree) for positively worded items and considered as an area for potential improvement when the result is below 50% according to the Agency for Healthcare Research and Quality.

Table (5.3) shows that the overall score of the quality domain is (3.84) and the percentage of impact is (71%). This indicates that nurses have a positive perception towards the impact of JCI accreditation on the quality of care at Augusta Victoria Hospital. The majority of respondents (75%) agreed that the AVH has shown steady quality improvement in the care provided to their patients in the medical, surgical, ICU, geriatric and oncology units. (72.5%) of respondents agreed that accreditation improved the patients' satisfaction, while (70%) of respondents agreed that accreditation improved the services provided by other departments such as laboratory, pharmacy, radiology and by administration including the human resources and finance. The lowest percentage (67.5%) of respondents agreed that the hospital has maintained high quality health services utilizing the available financial constraints.

Table (5.3) Quality domain: Impact of accreditation on quality of care as perceived by nurses at AVH.

Section (B) Quality Results	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	M (SD) PMS
1. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of customer satisfaction.	1.1	1.1	22	57.1	18.7	3.9 (0.740) 72.5%
2. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of services provided by the administration (finance, human resources).	1.1	4.4	22.2	57.8	14.4	3.8 (0.782) 70%
3. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of care provided to patients (medical, surgical, oncology, nephrology, ICU and geriatric patients).	0	3.3	13.2	64.8	18.7	4 (0.674) 75%
4. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of services provided by clinical support departments such as laboratory, pharmacy and radiology.	1.1	5.5	25.3	50.5	17.6	3.8 (0.840) 70%
5. Over the past 2 years, the hospital has maintained a high quality health services utilizing the available financial constraints.	2.3	6.8	25	51.1	14.8	3.7 (0.888) 67.5%
Total score = 3.84 (71%)						

(M: Mean SD: Standard Deviation PMS: percentages of Mean)

Table (5.4) shows that the majority of respondents (77.5%) agreed that the accreditation notably lowered the rate of blood transfusion reactions, improved the medication use, reduced medication errors and incidents, and increased the overall compliance of hand hygiene among hospital staff. Of all respondents (75%) agree that accreditation improved the patient safety measures, and significantly decreased the incidents of falling down, and increased the rate of successful code blue performance, while only (72.5%) of respondents ensured that the HCAs were reduced after accreditation. The overall score of the patients'

safety domain is (4.07) and the percentage is (76.75%), which indicates that the nurses at AVH have positive perceptions towards the impact of JCI accreditation on patients' safety results.

Table (5.4) Patient Safety Domain: Impact of accreditation on patients' Safety as perceived by nurses at AVH.

Section (B) <u>Patient Safety Results</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	M (SD) PMS
6. Accreditation enables the improvement of patient safety at your hospital.	1.1	4.4	12.1	54.9	27.5	4 (0.822) 75%
7. Accreditation increases the measurable improvement in the patient satisfaction.	1.1	4.4	16.7	48.9	28.9	4 (0.861) 75%
8. After accreditation the rate of hospital acquired infections has significantly reduced.	1.1	7.8	16.7	46.7	27.8	3.9 (0.926) 72.5%
9. Accreditation improved medication use and reduced medication errors/incidents	0	1.1	16.7	53.3	28.9	4.1 (0.709) 77.5%
10. Accreditation notably lowered the rate of blood transfusion reactions	0	3.4	16.1	47.1	33.3	4.1 (0.792) 77.5%
11. Accreditation increases the rate of successful code blue performance within the hospital departments.	0	6.7	14.4	48.9	30	4 (0.847) 75%
12. There is an increase rate of hand hygiene compliance among hospital staff after accreditation.	0	1.1	10	66.7	22.2	4.1 (0.600) 77.5%
13. Accreditation significantly decreased the incidents of falling down among patients.	1.1	3.3	14.4	57.8	23.3	4 (0.786) 75%
Total score = 4.07 (76.75%)						

(M: Mean SD: Standard Deviation PMS: percentages of Mean)

This means that the majority of nurses at Augusta Victoria Hospital have a positive perception towards the impact of JCI accreditation on the quality of care and the patient safety outcomes.

5.4 Leadership commitment and support domain

In this domain, nurses were questioned if a clear vision and leadership exists at AVH regarding the quality of care and services provided. Being the driving force behind quality improvement, nurses were asked if top management allocated resources for such activities and if nurses' participation was appreciated. Nurses were asked regarding change management activities based on suggestions and accreditation results.

Table (5.5) shows that the overall score of the positive responses is (3.8) and the percentage is (70%). This indicates that nurses have a positive perception towards the leadership commitment and support from the hospital management for providing a suitable work climate and supportive environment that improves the quality of care and health services at AVH. The highest percentage (72.5%) was related to that there is a clear vision articulated by the hospital management for improving the quality of care and services at AVH. The lowest percentage (67.5%) was related to the statement about the management of human, physical and financial resources to improve the quality of care at AVH which is considered as an area that need improvement and corrective actions from the hospital management.

Table (5.5) The nurses perception of leadership commitment and support to quality and safety improvement at AVH.

Section (B) <u>Leadership commitment and</u> <u>Support</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	M (SD) PMS
14. The Hospital management/leadership provides a work climate that promotes quality improvement & patient safety as a top priority	3.3	7.7	17.6	54.9	16.5	3.74 (0.940) 68.5%
15. Senior hospital executives provide highly visible leadership in maintaining an environment that supports quality improvement.	1.1	5.5	26.4	51.6	15.4	3.75 (0.824) 68.75%
16. The top management is a primary driving force behind quality improvement efforts.	0	1.1	26.4	59.3	13.2	3.85 (0.648) 71.25%
17. Senior hospital executives allocate available hospital resources (finances, staff, time & equipments) to improving quality.	2.2	7.8	23.3	54.4	12.2	3.7 (0.874) 67.5%
18. Senior hospital executives consistently participate in activities to improve the quality of care and services.	0	5.5	20.9	59.3	13.2	3.8 (0.786) 70%
19. Senior hospital executives have articulated a clear vision for improving the quality of care and services.	0	2.2	22.2	60	15.6	3.9 (0.677) 72.5%
20. Senior hospital executives have demonstrated an ability to manage the changes (e.g. technological) needed to improve the quality of care and services.	0	4.4	26.7	55.6	13.3	3.78 (0.731) 69.5%
21. The senior executives have a thorough understanding of how to improve the quality of care and services.	1.1	2.2	25.3	53.8	17.6	3.85 (0.773) 71.25%
22. Senior hospital executives establish confidence that efforts to improve quality will succeed.	2.2	3.3	27.8	46.7	20	3.8 (0.880) 70%
Total score = 3.8 (70%)						

(M: Mean SD: Standard Deviation PMS: percentage of Mean)

5.5 Strategic Quality Planning Domain

In this domain, nurses were asked if they were given adequate time to plan for quality improvement and how nurses are involved in developing plans to meet these objectives.

Table (5.6) shows the overall score is (3.76) and the percentage is (69%). This indicates that the nurses have a neutral perception towards the strategic quality planning at AVH. The highest percentages (72.5%) were in the statements related to the nursing involvement in developing plans for quality improvement and that the hospital's quality improvement goals are known for them. The lowest percentage (60.75%) was related to the adequate time given for nurses to plan for quality improvement, and this result is consistent with the results related to the workload in the nursing departments. The nursing leaders at AVH considered this neutral perceptions as an area for improvement that need planning and corrective actions.

Table (5.6) the nurses' perception of the strategic quality planning for quality and safety improvement at AVH.

Section (B) <u>Strategic Quality Planning</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	M (SD) PMS
23. Nurses are given adequate time to plan for improvements and test results.	3.3	15.4	25.3	47.3	8.8	3.43 (0.967) 60.75%
24. Each department and work group within the hospital maintains specific goals to improve quality	1.1	6.7	22.2	61.1	8.9	3.7 (0.771) 67.5%
25. The hospital's quality improvement goals are known throughout the organization.	0	4.4	18.7	62.6	14.3	3.9 (0.702) 72.5%
26. Nurses are involved in developing plans for improving quality.	0	1.1	26.4	51.6	20.9	3.9 (0.718) 72.5%
27. Middle managers (Nursing Supervisors and Head Nurses) play a key role in setting priorities for quality improvement.	4.4	3.3	16.5	57.1	18.7	3.8 (0.926) 70%
28. Patients' expectations about quality play a key role in setting priorities for quality improvement	1.1	4.4	24.2	51.6	18.7	3.8 (0.824) 70%
Total score = 3.76 (69%)						

(M: Mean SD: Standard Deviation PMS: percentages of Mean)

5.6 Human Resources Utilization Domain

In this domain, nurses were questioned if they received continuous education and training to improve job skills and performance, and if rewards and recognition were served for their efforts in quality improvement. Table (5.7) shows that the overall score is (3.71) and the percentage is (67.75%). This indicates that nurses have neutral perception towards the human resources utilization. There is a clear gap in the percentages of respondents that ranged from the highest percentage (77.5%) in that nurses are given needed training and continuous education to improve their competencies for quality improvement which is considered as positive perception and area of strength at AVH, to the lowest percentage (45%) in that the nurses are rewarded and recognized financially or otherwise for their efforts in quality improvement which reflects a negative perception and considered as an area that need improvement.

Table (5.7) The nurses perception of human resources utilizations for quality and safety improvement at AVH.

Section (B) <u>Human Resources Utilization</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (SD) PMS
29. Nurses are given education and training in how to identify and act on quality improvement opportunities.	1.1	5.5	9.9	58.2	25.3	4 (0.823) 75%
30. Nurses are given continuous education and training in methods that support quality improvement.	1.1	2.2	12.1	58.2	26.4	4.1 (0.809) 77.5%
31. Nurses are given the needed education and training (through nursing education programs) to improve job skills and performance.	1.1	4.4	12.1	57.1	25.3	4 (0.809) 75%
32. Nurses are rewarded and recognized (e.g., financially and/or otherwise) for improving quality.	22	20.9	20.9	27.5	8.8	2.8 (1.301) 45%
33. Inter-departmental cooperation to improve the quality of services is supported and encouraged.	0	7.7	18.7	61.5	12.1	3.8 (0.757) 70%
34. The hospital has an effective system for nurses to make suggestions to management on how to improve quality.	4.4	12.2	22.2	47.8	13.3	3.5 (1.018) 62.5%
Total score = 3.71 (67.75%)						

5.7 Quality Management Domain

In this domain, nurses were asked if their hospital viewed quality as a continuous search for ways to improve and the perception regarding the effectiveness of policies and procedures to support quality improvement at AVH.

Table (5.8) shows that the majority of respondents agreed and strongly agreed that the hospital viewed quality as a continuous search for ways to improve, and has effective policies and procedures to support this quality improvement. The overall score is (3.96) and the overall percentage of positive responses is (74%), which indicates that the nurses have a positive perception towards the quality management at AVH.

Table (5.8) The nurses perception of quality management to quality and safety improvement at AVH.

Section (B) <u>Quality Management</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	M (SD) PMS
35. The hospital regularly checks equipment and supplies to make sure they meet quality requirements.	0	4.4	6.6	71.4	17.6	4 (0.649) 75%
36. The hospital has effective policies & procedures to support improving the quality of care and services.	0	1.1	13.2	64.8	20.9	4 (0.621) 75%
37. The services that the hospital provides are thoroughly tested for quality before they are implemented.	0	3.3	19.8	62.6	14.3	3.9 (0.680) 72.5%
38. The hospital views quality improvement as a continuing search for ways to improve.	0	1.1	20.9	67	11	3.9 (0.593) 72.5%
39. The hospital encourages nurses to keep records of quality problems through documentation.	0	2.2	18.7	58.2	20.9	4 (0.698) 75%
Total = 3.96 (74%)						

(M: Mean SD: Standard Deviation PMS: percentages of Mean)

5.8 Use of Data Domain

In this domain, nurses were asked about the usage of data in the accreditation process which is a vital component in measuring performance and assessing quality of care provided to patients based on their needs and expectations.

Table (5.9) shows that the statements from B (40) to B (44) which are related to the use of data at AVH, the overall score is (3.86) and the percentage is (71.5%). This indicates that there is an a positive perception towards the use of data at AVH, but this system need to be more effective in issues related to the patients' satisfaction, complaints and expectations. The hospital management team and staff use thus data to support the process of quality improvement and patient safety. This means that nurses have a positive perception towards the use of data to support quality improvement at AVH, but still there is an areas for improvement especially in those related to the management of patient complaints and the way of communicating the reports about patient satisfaction between staff.

Table (5.9) The nurses perception of the use of data for quality and safety improvement at AVH.

<u>Section (B)</u> <u>Use of Data</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	M (SD) PMS
40. The hospital does a good job of assessing current & future patient needs and expectations.	0	3.3	22	56	18.7	3.9 (0.731) 72.5%
41. Patients' complaints are studied to identify patterns and learn from them to prevent the same problems from recurring.	3.3	5.5	17.6	54.9	18.7	3.8 (0.921) 70%
42. The hospital uses data from patients to improve services.	0	3.3	18.7	59.3	18.7	3.9 (0.711) 72.5%
43. Data on patient satisfaction are widely communicated to hospital staff.	0	4.4	26.7	55.6	13.3	3.8 (0.730) 70%
44. The hospital uses data on patient expectations and/or satisfaction when designing new services.	0	3.3	25.3	52.7	18.7	3.9 (0.748) 72.5%
Total score = 3.86 (71.5%)						

(M: Mean SD: Standard Deviation PMS: percentages of mean)

5.9 Staff Involvement in Accreditation

Table (5.10) shows that nurses have a positive perception related to their involvement in the process of preparation and implementation of the JCI at AVH, and they participated in many positive changes at the hospital recommended by the JCI survey. This indicated from the overall score of 4 and the high percentages of (75%). The majority of respondents (77.5%) were agree that there were important changes implemented at AVH during the preparation for the JCI, and (75%) of respondents were participated in these changes.

Table (5.10) The nurses perception of staff involvement to quality and safety improvement at AVH.

Section (B) JCI Accreditation Staff Involvement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	M (SD) PMS
45. During the preparation for the JCI accreditation, important changes were implemented at the hospital.	0	0	11	65.9	23.1	4.1 (0.574) 77.5%
46. You participated in the implementation of these changes.	1.1	3.3	9.9	63.7	22	4 (0.745) 75%
47. You learned of the recommendations made to your hospital since the last survey (JCI inspection)	1.1	2.2	9.9	70.3	16.5	3.9 (0.674) 72.5%
48. You participated in the changes that resulted from accreditation recommendations.	1.1	2.2	12.2	64.6	20	4 (0.718) 75%
Total score = 4 (75%)						

(M: Mean SD: Standard Deviation PMS: percentages of Mean)

5.10 Benefits of Accreditation

Table (5.11) shows that nurses have a positive perceptions related to the benefits of JCI accreditation at AVH; this indicated from the overall score of (3.97) and the percentage of (74.25%). The majority of nurses (75%) agreed that the JCI accreditation improved the patient care at AVH, enables the development of shared values by all staff within the hospital and enables the hospital to be effective responsive when changes are needed to be implemented. While (72.5%) of nurses positively agreed that the accreditation helps to facilitate teamwork, collaboration and leads to effective management of internal resources and to better respond to the populations and community needs.

Table (5.11) Benefits of JCI accreditation as perceived by nurses at Augusta Victoria Hospital.

Section (B) Benefits of Accreditation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	M (SD) PMS
49. Accreditation enables the improvement of patient care.	0	2.2	18.9	47.8	31.1	4 (0.767) 75%
50. Accreditation enables the motivation of staff and encourages team work and collaboration.	1.1	5.6	17.8	48.9	26.7	3.9 (0.878) 72.5%
51. Accreditation enables the development of values shared by all professionals at the hospital.	1.1	1.1	18.9	50	28.9	4 (0.792) 75%
52. Accreditation enables the hospital to better use its internal resources (e.g. finances, people, time, and equipment).	1.1	4.5	18.2	51.1	25	3.9 (0.849) 72.5%
53. Accreditation enables the hospital to better respond to the populations needs.	0	4.4	22	49.5	24.2	3.9 (0.800) 72.5%
54. Accreditation enables the hospital to be more responsive when changes are to be implemented.	0	2.2	16.5	54.9	26.4	4 (0.720) 75%
Total score = 3.97 (74.25%)						

(M: Mean SD: Standard Deviation PMS: Percentages of Mean)

5.11 Areas for potential improvements at Augusta Victoria Hospital

The study results were communicated with the nursing leaders and concerned managers at AVH and according to their feedback, they considered the score below 70% as an area for potential improvement and that they need to take corrective actions toward it. Table (5.12) shows a summary of the areas that are potential for improvements and the score of each item in the area.

Table (5.12) Summary for areas of potential improvements at AVH

Domain	Item	Score
Quality Results	Over the past 2 years, the hospital has maintained a high quality health services utilizing the available financial constraints (B 5)	67.5%
Leadership commitment and support	The Hospital management/leadership provides a work climate that promotes quality improvement & patient safety as a top priority (B 14)	68.5%
Leadership commitment and support	Senior hospital executives provide highly visible leadership in maintaining an environment that supports quality improvement (B 15)	68.75%
Leadership commitment and support	Senior hospital executives allocate available hospital resources (finances, staff, time & equipments) to improving quality (B 17)	67.5%
Leadership commitment and support	Senior hospital executives have demonstrated an ability to manage the changes (e.g. technological) needed to improve the quality of care and services (B 20)	69.5%
Strategic Quality Planning	Nurses are given adequate time to plan for improvements and test results (B 23)	60.75%
Strategic Quality Planning	Each department and work group within the hospital maintains specific goals to improve quality (B 24)	67.5%
Human Resources Utilization	Nurses are rewarded and recognized (e.g., financially and/or otherwise) for improving quality (B 32)	45%
Human Resources Utilization	The hospital has an effective system for nurses to make suggestions to management on how to improve quality (B 34)	62.5%

5.12 Impact of Demographic Variables on Nursing Perceptions

ANOVA test was carried out to assess if there is a significant differences among nurses' perceptions towards the impact of JCI accreditation on the quality of care and patient safety on the basis of the demographic factors including gender, age, years of experience, level of education and the seniority level.

Table (5.13) shows that there is no significant difference between gender and quality of care ($\alpha=0.807$) and patient safety ($\alpha=0.565$).

Table (5.13): One-Way ANOVA comparing the nurses' perception towards the impact of JCI accreditation on the quality of care and patient safety according to gender.

Gender		Sum of Squares	Df	Mean Square	F	Sig.
Quality of care results	Between Groups	0.023	1	0.023	0.060	0.807
	Within Groups	33.004	85	0.388		
	Total	33.027	86			
Patients' Safety result	Between Groups	0.097	1	0.097	0.333	0.565
	Within Groups	23.793	82	0.290		
	Total	23.890	83			

**Statistically Significance $P \leq 0.05$*

Table (5.14) shows that there is no significant difference between age groups and quality of care ($\alpha=0.381$) and patient safety ($\alpha=0.650$).

Table (5.14): One-Way ANOVA comparing the nurses' perception towards impact of JCI accreditation on the quality of care and patient safety according to age.

Age		Sum of Squares	Df	Mean Square	F	Sig.
Quality of care results	Between Groups	0.752	2	0.376	0.977	0.381
	Within Groups	31.957	83	0.385		
	Total	32.709	85			
Patients' safety result	Between Groups	0.249	2	0.125	0.434	0.650
	Within Groups	22.978	80	0.287		
	Total	23.227	82			

**Statistically Significance $P \leq 0.05$*

Table (5.15) shows that there is no significant difference between the years of experience and quality of care ($\alpha=0.992$) and patient safety ($\alpha=0.704$).

Table (5.15): One-Way ANOVA comparing the nurses' perception towards the impact of JCI accreditation on quality of care and patient safety according to years of experience.

Years of experience		Sum of Squares	Df	Mean Square	F	Sig.
Quality of care results	Between Groups	0.038	3	0.013	0.032	0.992
	Within Groups	32.989	83	.397		
	Total	33.027	86			
Patients' safety results	Between Groups	0.414	3	0.138	0.471	0.704
	Within Groups	23.475	80	0.293		
	Total	23.890	83			

**Statistically Significance $P \leq 0.05$*

Table (5.16) shows that there is no significant difference between the level of education and quality of care ($\alpha=0.921$) and patient safety ($\alpha=0.771$).

Table (5.16): One-Way ANOVA comparing the nurses' perception towards the impact of JCI accreditation on quality of care and patient safety according to the level of education.

Level of Education		Sum of Squares	Df	Mean Square	F	Sig.
Quality of care results	Between Groups	0.194	3	0.065	0.163	0.921
	Within Groups	32.833	83	0.396		
	Total	33.027	86			
Patients' safety results	Between Groups	0.332	3	0.111	0.376	0.771
	Within Groups	23.558	80	0.294		
	Total	23.890	83			

**Statistically Significance $P \leq 0.05$*

Table (5.17) shows that there is no significant difference between the seniority level and quality of care ($\alpha=0.940$) and patient safety ($\alpha=0.732$).

Table (5.17): One-Way ANOVA comparing the nurses' perception towards the impact of JCI accreditation on quality of care and patient safety according to the seniority level.

Seniority Level		Sum of Squares	Df	Mean Square	F	Sig.
Quality of care results	Between Groups	0.158	3	0.053	0.133	0.940
	Within Groups	32.869	83	0.396		
	Total	33.027	86			
Patients' safety results	Between Groups	0.379	3	0.126	0.430	0.732
	Within Groups	23.511	80	0.294		
	Total	23.890	83			

**Statistically Significance $P \leq 0.05$*

Table (5.18) Summary of quality and safety results by demographic variables

Demographic Factors	Quality of Care (Sig) (<i>P-value</i>)	Patient Safety (Sig) (<i>P-value</i>)
Gender	0.807	0.565
Age	0.381	0.650
Level of Education	0.992	0.704
Years of Experience	0.921	0.771
Seniority Level	0.940	0.732

This means that there were no statistically significant differences among nurses' perceptions on the basis of the demographic factors. As a result, the null hypothesis; that there is no significant difference between the demographic factors (age, gender, level of education, years of experience and seniority level) and nurses' perceptions towards the impact of JCI accreditation on patient safety and quality of care, was accepted.

5.13 Impact of Organizational Variables on Nursing Perceptions

The association between the dependent and independent variables was tested using the Pearson correlation analysis. As shown in table (5.19), there is a significant positive relationship between the quality of care and the organizational factors: leadership, commitment and support ($r = 0.583$), strategic quality planning ($r = 0.376$), quality management ($r = 0.439$), human resources utilizations ($r = 0.277$), use of data ($r = 0.298$) and staff involvement ($r = 0.567$) as perceived by nurses at AVH.

Table (5.19): Pearson correlation results between the organizational factors and the quality of care as perceived by nurses at AVH.

Organizational Factors	Pearson Correlation (r)	Sig (2-tailed)
Leadership, commitment and support	0.583	0.001
Strategic Quality Planning	0.376	0.001
Human Resources Utilizations	0.277	0.009
Quality Management	0.439	0.001
Use of Data	0.298	0.005
Staff Involvement	0.567	0.001

**Statistically Significance $P \leq 0.05$*

Table (5.20) shows that there is a significant positive relationship between the patients' safety and the organizational factors: leadership, commitment and support ($r = 0.485$), strategic quality planning ($r = 0.406$), quality management ($r = 0.461$), human resources utilizations ($r = 0.437$), use of data ($r = 0.568$) and staff involvement ($r = 0.384$) as perceived by nurses at AVH.

Table (5.20): Pearson correlation results between the organizational factors and the patient safety as perceived by nurses at AVH.

Organizational Factors	Pearson Correlation (r)	Sig (2-tailed)
Leadership, commitment and support	0.485	0.001
Strategic Quality Planning	0.406	0.001
Human Resources Utilizations	0.437	0.001
Quality Management	0.461	0.001
Use of Data	0.568	0.001
Staff Involvement	0.384	0.001

**Statistically Significance $P \leq 0.05$*

This means that there were statistically significant correlations with positive relationship between the nurses' perceptions on the basis of the organizational factors. As a result, the null hypothesis; that there is no significant difference between the organizational factors (leadership commitment and support, strategic quality planning, quality management, human resources utilizations, use of data and staff involvement) and nurses' perceptions towards impact of JCI accreditation on patient safety and quality of care, was rejected.

5.14 Summary

This chapter includes the demographic variables of the participants, data related to the quality training, workload and organizational factors. In addition to the findings related to the dependent and independent variables of the study and the research hypotheses.

Chapter Six

Discussion of Findings

6.1 Introduction

This chapter includes discussion of the study findings in relation to the previous studies. The characteristics of nurses working at Augusta Victoria Hospital are included in the discussion. Furthermore, the impact of JCI accreditation on the quality of care and patients' safety is discussed from the perception of nurses. In addition the relationship between the nurses' perception and the selected demographic and organizational factors are discussed in reference to the literature.

6.2 Participants Characteristics

One hundred and twenty five questionnaires were distributed to the nurses working in the inpatient and outpatient departments at Augusta Victoria Hospital. Ninety one were returned back with a response rate of (72.8%). This rate is considered high and adds strength to the study results.

The majority of respondents were males (60.4%), this could be related to the fact that 60% of the nurses working at AVH are males.

The majority of respondents (80.3%) were young below or equal 40 years of age and out of them (48.3%) were less than 30 years of age. The majority of respondents (60.5%) had experience of equal and less than 10 years. This result could be explained as follows: first, AVH gives the chance to new graduate nurses to be hired at the hospital. Second, the nurses with long years of experience in the hospital prefer to move to hospital related public clinics and health centers with straight morning duties, so as to get rid of evening and night shift duties. Third, is related to that experienced nurses get good chances for employment outside the country or in the nursing and training field.

The majority had Bachelor's degrees (74.7%) and about (17.6%) completed their higher education as post graduate diplomas and masters degrees. The study showed that (79.1%) of the nurses are staff nurses, (11%) head nurses and (2.2%) nursing supervisors. Only

(7.7%) of the respondents were practical nurses with diploma degrees. This result is related to the fact that the hospital's policy is to employ nurses with at least a bachelor's degree due to the fact that AVH is a highly specialized hospital that needs qualified and competent nurses to provide a good quality of health care and services. On the other hands, the majority of nurses working at AVH have studied at local universities such as Bethlehem University, Al-Quds University, Hebron University and Al-Najah University where the nursing program is based on the curriculum of Bachelors Nursing degree.

About (86.8%) of the respondents were trained in quality, thus indicating that the Augusta Victoria Hospital invested a lot in nursing education and training and quality of care. The study showed that the majority of training (82.3%) was about policies and procedures within the JCI standards due to the fact that AVH is a JCI accredited hospital. In addition to other training on infection prevention and control (59.5%), patient safety (41.8%), leadership and management (31.6%), ISO policies and standards (22.8%) and team building (11.4%). El-Jardali et al (2008) emphasized that staff training and education is an important indicator of effective human resource management and significantly associated with improvement in the quality of care and safety practices. Also, Jaber (2014) found that JCI accreditation had a positive influence on providing training and continuous education to nurses, which is a vital factor for building their competencies and for enhancing their quality performance.

The study showed that the majority of participants (82.8%) were under extensive work loads and (17.2%) were under moderate work load. This work load due to the fact that AVH contains a specialized cancer care center, kidney dialysis center and has the only radiotherapy and pediatric kidney dialysis centers in Palestine that provide high quality health services to the Palestinian population from the West Bank and Gaza Strip.

6.3 Improvement in the quality of care as perceived by nurses

The study shows that nurses have a positive perception towards the impact of JCI accreditation on the quality of care at Augusta Victoria Hospital. The majority of respondents (75%) agreed that AVH has shown steady quality improvement in the care

provided to their patients at the medical, surgical, ICU, geriatric and oncology units. (72.5%) of respondents agreed that the accreditation improved patients' satisfaction, while (70%) of respondents agreed that the accreditation improved the services provided by other departments such as laboratory, pharmacy, radiology and by administration including the human resources and finance. The lowest percentage (67.5%) of respondents agreed that the hospital has maintained high quality health services utilizing the available financial constraints, but this percentage is considered as an area for potential improvement at AVH. These findings are consistent with the findings of Jaber (2014), Al-Qahtani et al (2012), Al-Awa et al (2011) and El-Jardali et al (2008) which showed that there is a significant relationship between JCI accreditation and improvement in the quality of care. Also consistent with Al-Awa et al (2011), who stated that JCI supports the effective management of resources and strengthens the community confidence in the hospital efforts to provide the highest quality health services that meet the customer satisfaction.

6.4 Improvement in the patients' safety as perceived by nurses

The study shows that nurses have positive perceptions towards the impact of JCI accreditation on patients' safety at AVH. This was indicated from the overall score of (4.07) and the percentage of (76.75%). The majority of respondents (77.5%) agreed that the accreditation notably lowered the rate of blood transfusion reactions, improved the medication use, reduced medication errors and incidents, and increased the overall compliance of hand hygiene among hospital staff. Of all respondents (75%) agreed that accreditation improved the patient safety measures, and significantly decreased the incidents of falling down, and increased the rate of successful code blue performance, although (72.5%) of respondents agreed that the HCAs were reduced after accreditation. These findings are consistent with the findings of Al-Shummari et al (2015), Al-moajal et al (2012) and Al-Awa et al (2011), which indicated that JCI accreditation has positive impact on patient safety indicators through strengthening the patient safety efforts and building a culture of patients' safety within the health care organization, and supporting the culture of practicing the infection prevention and control measures such as hand hygiene, reducing the rate of health care acquired infections and encouraging staff to report incidents for corrective actions. It also improves the knowledge and awareness amongst the staff and the patient about medications. According to the study conducted by Al-Awa et al (2011), post accreditation the mortality rate was reduced, the rate of HCAs was reduced,

medication errors were reduced, blood transfusion reactions were reduced and the performance of successful code blue attempts were significantly increased.

6.5 Quality improvement activities (leadership commitment and support, strategic quality planning, quality management, human resources utilization, use of data and staff involvement) as perceived by nurses

The study shows that nurses have a positive perception towards the quality improvement activities at Augusta Victoria Hospital (AVH) which include the leadership, commitment and support, strategic quality planning, quality management, human resources utilizations, use of data and staff involvement in JCI. Table (6.1) shows the results summary of these quality improvement activities as perceived by nurses at AVH, and ranged from the highest percentage (75%) of staff involvement in JCI implementation and accreditation, to the lowest percentage (67.75%) of human resources utilizations. This result could be explained as follows: first, AVH is a JCI accredited hospital, and nurses play an important role in the process of JCI implementation and accreditation. Second, is that nurses are not well rewarded and recognized financially or otherwise for their participation in the process of quality improvement at AVH in spite of the fact that nurses are given a lot of training and education on quality improvement.

Table (6.1) Summary of quality improvement activities as perceived by nurses at AVH

Quality improvement activities	Mean	% of Mean
Leadership, commitment and support	3.8	70%
Strategic Quality Planning	3.76	69%
Human Resources Utilizations	3.71	67.75%
Quality Management	3.96	74%
Use of Data	3.86	71.25%
Staff Involvement	4	75%

The study shows that nurses have a positive perception towards leadership commitment and support from the hospital management for providing a suitable work climate and supportive environment that improves the quality of care and health services at AVH. The highest percentage (72.5%) was related to the articulation of a clear vision by the hospital management for improving the quality of care and services at AVH. The lowest percentage (67.5%) was related to the management of human, physical and financial resources to

improve the quality of care. In the strategic quality planning, the highest percentage (72.5%) was related to the nursing involvement in developing plans for quality improvement as the hospital's quality improvement goals are known to them. The lowest percentage (60.75%) was related to the adequate time given for nurses to plan for this quality improvement, and this is related to the fact that nurses work in units that are heavily work loaded according to their responses. These findings support the findings of Manzo et al (2012) who indicated that nurses were involved in planning for quality improvement, but were not given adequate time to plan and test this quality improvement.

Findings showed that there is a clear gap in the percentages of respondents related to the human resources utilizations, this gap ranged from the highest percentage (77.5%) in that nurses are given needed training and continuous education to improve their competencies for quality improvement, to the lowest percentage (45%) in that the nurses are rewarded and recognized financially or otherwise for their efforts in quality improvement. This could be explained as follows: first, AVH has a good system for investing in nurses' education and development. Second, AVH has an education department that monitors on the job training and in-service education that depends on competency based education and evidence based practice. Third, there is no clear motivational system for rewarding staff for their participation and efforts in quality and safety improvement, thus making them feel that their efforts are not well recognized.

Moreover nurses have positive perception towards the quality management at AVH. The majority of respondents (74%) agreed that the hospital viewed quality as a continuous search for ways to improve, has effective policies and procedures to support this quality improvement, encourages nurses to documents quality problems for follow up and corrective actions. This result could be explained as follows: first, AVH has a quality department that monitors the quality system within the hospital. Second, the quality committee plays an important role in setting policies and procedures in order to standardize health care at the hospital. third, the presence of quality officers and sub quality committees from multi-disciplinary team who monitor the compliance of different quality measures at the hospital.

The study shows that nurses at AVH have positive perception about the presence of a good system for the use of data related to the patients' satisfaction, complaints and expectations. This result is due to the fact that the hospital conducts a quarterly surveillance about

patients' satisfaction and the results are disseminated through the hospital outlook to all staff working at the hospital for necessary corrective actions in order to improve services provided to patients.

The study shows that nurses at AVH have a positive perception related to their involvement in the process of preparation and implementation of JCI accreditation, and they participated in many changes at the hospital as recommended by the JCI's survey. These findings are consistent with the findings of Manzo et al (2012), which stated that the nurse has a critical role and unique abilities as a team member and assists the health care organization during the implementation and the monitoring of the process of accreditation. Thus the accreditation process is influenced by the nursing actions, commitment and support.

The study shows that there were no statistically significant relationship between the demographic variables (gender, age, years of experience, level of education, seniority level) and nurses perceptions towards the impact of JCI accreditation on the quality of care and patient safety at AVH. These findings prove the fact that the education system and awareness raising about the JCI and quality program was implemented at the hospital and targeted all nurses regardless to their background. These findings congruent with the findings of Jaber (2014), which showed that there was no significant relationship amongst the nurses in Saudi Arabian accredited hospitals, on the basis of demographic data. It is also consistent with the findings of Al-Qahtani (2012), which is related to gender, level of education and seniority level, which did not show any significant relationship. However, they are in contrast with the findings of Al-Qahtani that were related to the age and years of experience and showed to have an impact on nurses' perceptions of quality.

Liewellyn (2014) stated that nurses are at the center of the patient care, and play a very important role in the area of quality and safety in any health care organization, therefore they are responsible in shaping quality and safety and considered as essential drivers for quality improvement

The study shows that there is a statistically significant relationship among the nurses' perceptions towards quality of care and patient safety on the basis of these organizational data. These findings are consistent with the findings of Jaber (2014), Abolfotouh et al (2014), Al-Awa et al (2011), El-Jardali et al (2008), which indicated that there is a positive relationship between the nurses perceptions, towards the impact of accreditation on the quality of care and patient safety, and the quality improvement activities which include: leadership commitment and support, strategic quality planning, human resources utilizations, quality management, use of data and staff involvement.

The study shows that the leadership commitment and support variable is significantly correlated with the nursing perception towards improvement in the quality of care and patients' safety at AVH. These findings are consistent with Jaber (2014), Al-Qahtani et al (2012) and El-Jardali et al (2008), who concluded with the same results that the quality of care is positively correlated with the top management's leadership commitment and support, and considered this variable as a best predictor of quality of care and that without this commitment from the top management, there will be an absence of quality improvement. Also, the finding of this study supported the findings of Talib et al (2011), who considered this variable as one of the most important components of quality management that is needed for quality and safety improvement in the health care organizations. Furthermore, the Joint Commission (2014) emphasized that the accreditation process is influenced by the top management leadership support and considered the supportive leadership as a vital component to successfully achieve the JCI accreditation.

Findings showed that the strategic quality planning variable is significantly correlated with the nursing perception towards improvement in the quality of care and patients' safety at AVH. These findings are consistent with the findings of Manzo et al (2012), that the nurse has a critical role in planning for quality improvement. The nurses within the organizational structure are positioned to interact with all the areas of support; they are autonomous, responsible, leaders, managers and clinical auditors. The accreditation processes are influenced by their involvement, planning and actions. Also, the importance of strategic quality planning in the process of quality improvement was emphasized by

many researchers in their review of literature such as Jaber (2014), Manzo et al (2012) El-Jardali et al (2008).

The human resources utilizations variable is significantly correlated with the nursing perception towards improvement in the quality of care and patients' safety at AVH. These findings are consistent with the findings of Jaber (2014) and Hyder et al (2010) who found that there is a positive relationship between improvement in the quality of care and utilizations of the human resources. They stressed on the fact that employee satisfaction is directly affected by the utilization methods of human resources which are linked to the performance of staff within the health care organizations. In this study the nurses' education and training got the highest score, while the staff recognition and reward got the lowest score. These findings are consistent with the findings of Al-Qahtani et al (2012), Talib et al (2011) and El-Jardali et al (2008), that the staff education, training, reward and recognitions were considered as important indicators associated with the process of quality and safety improvement.

Moreover the quality management variable is significantly correlated with the nursing perception towards improvement in the quality of care and patients' safety at AVH. These findings support the findings of Jaber (2014), Manzo et al (2012), Talib et al (2011), Al-Awa et al (2011) and El-Jardali et al (2008) that quality management is an important factor in the process of quality improvement activities. Moreover, Alkhenizan & Shaw (2011) and Joint Commission (2014) reported that JCI accreditation has a significant role in improving the process of quality management.

Another finding of this study was that the use of data variable is significantly correlated with the nursing perception towards improvement in the quality of care and patients' safety at AVH. These findings are consistent with the findings of Change et al (2013), El-Jardali et al and Al-Awa et al (2011) that the use of data has a positive impact towards the quality improvement and helps the health care organizations assess and measure the patients' needs and track improvements for the purpose of continuous quality improvement. El-Jardali et al (2008) focused on the use of data as an important factor in assessing, tracking and measuring quality performance and considered the absence of an effective information system as a barrier for the implementation of successful quality improvement. On the other hands, Jaber (2014) failed to show that the use of data is an important factor of quality

improvement and the researcher explained that this contraindicating result was related to the time of conducting the research, when nurses did not perceive the importance of the use of data on the quality of care, because the hospitals have started using the information system for a short period before implementing the study.

The study also shows that the staff involvement variable is significantly correlated with the nursing perception towards improvement in the quality of care and patients' safety at AVH. These findings support the recommendations of the Joint Commission (2014), that nurses and health care providers should be involved in the process of JCI implementation and in developing action plans post JCI inspection for taking the appropriate corrective actions in the implementation of positive changes towards quality and safety improvements.

6.6 Summary

This chapter discussed and described the findings of the study in relation to the previous studies that are related to the Joint Commission and its impact on the quality of health care and patients' safety in the health care organizations.

Chapter Seven

Conclusions and Recommendations

7.1 Conclusion

Health care organizations worldwide introduce the JCI accreditation as a tool to strengthen and improve the quality of the health care services they provide to their patients and to their communities. Quality of care and patients' safety are the core of the JCI accreditation system. This study employed an assessment of the nurses' perceptions towards the impact of the JCI accreditation on the quality of care and the patients' safety at Augusta Victoria Hospital (AVH).

The study followed a quantitative descriptive cross sectional design in which data from 91 nurses working at the inpatient and outpatient departments in AVH were analyzed. The results of this study showed that nurses at Augusta Victoria Hospital, have a positive perception towards improvement in the quality of care and improvement in the patients' safety after AVH became a JCI accredited hospital. Furthermore, they have a positive perception towards improvement in the organizational factors including: leadership commitment and support, strategic quality planning, human resources utilizations, quality management, use of data and staff involvement in the process of JCI implementation and accreditation. The study also showed that the above mentioned organizational factors were positively associated with the quality of care results and with the patients' safety results. On the other hands, these findings indicated that there was no significant relationship between the demographic factors, including gender, age, years of experience, level of education and seniority level, and the perceptions of nurses towards improvement in the quality of care and patients' safety.

7.2 Recommendations

Improving quality of care and patients' safety should be a top strategic priority for all health care providers, health administrators, managers, leaders and policy makers. The commitment to improve quality and patient safety should also be articulated at the highest level of the health care system and translated into policies, procedures and protocols that support quality improvement programs and patient safety measures.

7.2.1 Recommendations for Augusta Victoria Hospital:

1. Nursing leaders need to pay attention to the workload present in the units in order to ensure that nurses are given adequate time to plan for quality and safety improvement in their departments. Adequate nursing staffing is a key component to improve the quality of care and patients' safety.
2. Developing a safety culture within the hospital is attained through strong leadership, careful planning and monitoring. The hospital management has to develop an effective system for nurses and other staff to enhance suggestions for quality improvement and involve them in the decision making process to enhance their confidence and commitment to what needs to be done.
3. Designing a motivation system for nurses and other staff based on their performance appraisal in order to facilitate the implementation of the JCIA standards, thus making them feel that their efforts and their participation towards quality improvements are rewarded and recognized. Establishing an effective reward system is very crucial to make nurses feel respected and appreciated for their skills and their participation in the quality improvement process.
4. Developing new indicators that closely measure the staffs' and the managers' quality performance in relation to their quality improvement activities including leadership commitment, strategic quality planning, human resources utilization, quality management and use of data.
5. Continual adoption and commitment to the JCIA standards as a major quality program that enhances the process of continuous quality and safety improvement at the hospital is of vital necessity.

7.2.2 Recommendations for national policy makers

1. Initiating the application of the international quality programs at the health care organizations in Palestine in order to improve the overall quality of health care, to strengthen patient's safety, to minimize medical errors and to reduce patients' harm.
2. All Palestinian hospitals must develop policies and procedures for professional standards of patients' care that are based on the international standards and on evidence of best practices such as WHO patient safety and friendly initiatives.

7.2.3 Further Research

1. Since the study was conducted in Augusta Victoria Hospital, it is crucial to conduct similar comparative studies in other JCI accredited hospitals in East Jerusalem.
2. An in depth assessment of the relationship between the JCI accreditation and the patient safety indicators is needed to ensure effective safety improvements based on measuring these patients' outcome indicators.
3. An in depth assessment of the relationship between the JCI accreditation and the quality indicators is needed to ensure effective quality improvement.
4. Comparative studies on the quality and patient safety outcomes among JCI accredited hospital and non accredited hospitals in Palestine are also required.
5. An in depth assessment of the impact of JCI accreditation on the management of human, financial and physical resources is needed so as to compare the results with the non accredited hospitals in Palestine.
6. Conduct assessment studies to determine the factors associated with the successful implementation of the JCIA standards among health care workers.

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Annex (1)

Questionnaire

Dear nurses,

My name is Jihad K. Khair. I am a Master's degree candidate in the school of Public Health at Al-Quds University. I am conducting a research study as part of the requirements of my degree in the program of Health Policies and Management. The aim of the study is to assess the nurses' perception towards the impact of Joint Commission International accreditation on the quality of care and patients' Safety at Augusta Victoria Hospital.

It is estimated to take you 10-15 minutes to complete the questionnaire. The questionnaire is anonymous and you are not required to put your name. The aggregated data will be reported as summary statistics only. Your participation in this survey is voluntary, and you have the right not to respond. Returned completed questionnaires will indicate your agreement.

However, I highly appreciate your participation as your input will add value to the findings of the study.

Please return this questionnaire in a closed envelope and keep it at the reception in the special designated box.

Thank you for your cooperation and time

Part Two (Section-B)

Please indicate the extent to which you agree or disagree that the statement characterizes your hospital by circling the appropriate response (1 = Strongly Disagree, 5 = Strongly Agree).

<u>Quality Results</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of customer satisfaction.					
2. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of services provided by the administration (finance, human resources, etc.)					
3. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of care provided to patients (medical, surgical, oncology, nephrology, ICU and geriatric patients).					
4. Over the past 2 years, the hospital has shown steady, measurable improvements in the quality of services provided by clinical support departments such as laboratory, pharmacy and radiology.					
5. Over the past 2 years, the hospital has maintained a high quality health services utilizing the available financial constraints.					
<u>Patient Safety Results</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
6. Accreditation enables the improvement of patient safety at your hospital.					
7. Accreditation increases the measurable improvement in the patient satisfaction.					
8. After accreditation the rate of hospital acquired infections has significantly reduced.					
9. Accreditation improved medication use and reduced medication errors/incidents					
10. Accreditation notably lowered the rate of blood transfusion reactions					
11. Accreditation increases the rate of successful code blue performance within the hospital departments.					
12. There is an increase rate of hand hygiene compliance among hospital staff after accreditation.					

13. Accreditation significantly decreased the incidents of falling down among patients.					
<u>Leadership commitment and Support</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14. The Hospital management/leadership provides a work climate that promotes quality improvement & patient safety as a top priority					
15. Senior hospital executives provide highly visible leadership in maintaining an environment that supports quality improvement.					
16. The top management is a primary driving force behind quality improvement efforts.					
17. Senior hospital executives allocate available hospital resources (finances, staff, time & equipments) to improving quality.					
18. Senior hospital executives consistently participate in activities to improve the quality of care and services.					
19. Senior hospital executives have articulated a clear vision for improving the quality of care and services.					
20. Senior hospital executives have demonstrated an ability to manage the changes (e.g. technological) needed to improve the quality of care and services.					
21. The senior executives have a thorough understanding of how to improve the quality of care and services.					
22. Senior hospital executives establish confidence that efforts to improve quality will succeed.					
<u>Strategic Quality Planning</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23. Nurses are given adequate time to plan for improvements and test results.					
24. Each department and work group within the hospital maintains specific goals to improve quality					
25. The hospital's quality improvement goals are known throughout the organization.					
26. Nurses are involved in developing plans for improving quality.					

27. Middle managers (Nursing Supervisors and Head Nurses) play a key role in setting priorities for quality improvement.					
28. Patients' expectations about quality play a key role in setting priorities for quality improvement					
<u>Human Resources Utilization</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
29. Nurses are given education and training in how to identify and act on quality improvement opportunities.					
30. Nurses are given continuous education and training in methods that support quality improvement.					
31. Nurses are given the needed education and training (through nursing education programs) to improve job skills and performance.					
32. Nurses are rewarded and recognized (e.g., financially and/or otherwise) for improving quality.					
33. Inter-departmental cooperation to improve the quality of services is supported and encouraged.					
34. The hospital has an effective system for nurses to make suggestions to management on how to improve quality.					
<u>Quality Management</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
35. The hospital regularly checks equipment and supplies to make sure they meet quality requirements.					
36. The hospital has effective policies & procedures to support improving the quality of care and services.					
37. The services that the hospital provides are thoroughly tested for quality before they are implemented.					
38. The hospital views quality improvement as a continuing search for ways to improve.					
39. The hospital encourages nurses to keep records of quality problems through documentation.					
<u>Use of Data</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
40. The hospital does a good job of assessing current & future patient needs and expectations.					

41. Patients' complaints are studied to identify patterns and learn from them to prevent the same problems from recurring.					
42. The hospital uses data from patients to improve services.					
43. Data on patient satisfaction are widely communicated to hospital staff.					
44. The hospital uses data on patient expectations and/or satisfaction when designing new services.					
<u>JCI Accreditation</u>	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Staff Involvement</i>					
45. During the preparation for the JCI accreditation, important changes were implemented at the hospital.					
46. You participated in the implementation of these changes.					
47. You learned of the recommendations made to your hospital since the last survey (JCI inspection)					
48. You participated in the changes that resulted from accreditation recommendations.					
<i>Benefits of Accreditation</i>					
49. Accreditation enables the improvement of patient care.					
50. Accreditation enables the motivation of staff and encourages team work and collaboration.					
51. Accreditation enables the development of values shared by all professionals at the hospital.					
52. Accreditation enables the hospital to better use its internal resources (e.g. finances, people, time, and equipment).					
53. Accreditation enables the hospital to better respond to the populations needs.					
54. Accreditation enables the hospital to be more responsive when changes are to be implemented.					

Thank you for your cooperation

Name of Experts

1. Dr. Motasem Hamdan. PHD. Dean-School of Public Health, Al-Quds University.
2. Dr. Tawfiq Nasser. PHD. Chief Executive Officer (CEO), Augusta Victoria Hospital.
3. Mrs. Maha Tarayrah. MA. Director of Nursing Education and Development, Augusta Victoria Hospital.