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**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF HEALTH SCIENCE**  
**DEPARTMENT OF NURSING AND MIDWIFERY**  
**POSTGRADUATE PROGRAM**

**ASSESSMENT ON FACTORS AFFECTING IMPLEMENTATION OF  
NURSING PROCESS AMONG NURSES IN SELECTED  
GOVERNMENTAL HOSPITALS, ADDIS ABABA, ETHIOPIA.**

**BY: MULUGETA ASERATIE (BScN).**

**JUNE 2011, ADDIS ABABA, ETHIOPIA.**

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**A thesis submitted to the school of graduate studies of Addis  
Ababa University in partial fulfillment of the requirements for  
the degree of Masters of Science in Adult Health Nursing in  
department of nursing.**

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# Table of Content

Content	Page No
Acknowledgment .....	I
Table of Content.....	II
List of Tables.....	IV
List of Figures .....	V
Abbreviations .....	VI
Summary .....	VII
CHAPTER ONE .....	1
1. INTRODUCTION.....	1
1.1. Background .....	1
1.2. Statement of the Problem .....	3
1.3. Significance of the Study .....	12
CHAPTER TWO.....	13
2. LITERATURE REVIEW .....	13
CHAPTER THREE.....	22
3. OBJECTIVES .....	22
3.1. General Objective.....	22
3.2. Specific Objectives.....	22
CHAPTER FOUR.....	23
4. METHOD AND MATERIAL .....	23
4.1. Study Area.....	23
4.2. Study Design .....	23
4.3. Source Population .....	23
4.4. Study Population .....	24
4.5. Eligible Criteria .....	24
4.5.1. Inclusive .....	24
4.5.2. Exclusive Criteria.....	24
4.6. Sample Size Determination.....	24
4.7. Sampling Procedure .....	25
4.9. Method of Data Collection.....	28

4.10. Variable .....	28
4.10.1. Dependent.....	28
4.10.2. Independent .....	28
4.11. Operational Definition.....	28
4.12. Data Quality Assurance.....	28
4.13. Reliability and Validity of Data Collecting Instruments.....	29
4.14. Data Analysis .....	29
4.14.1. Quantitative .....	29
4.14.2. Qualitative .....	29
4.15. Pretest .....	30
4.16. Ethical Consideration .....	30
4.17. Dissemination of Result .....	30
CHAPTER FIVE.....	31
5. RESULT .....	31
5.1. Quantitative Study Result.....	31
5.2. Qualitative Study .....	49
CHAPTER SIX .....	56
6. DISCUSSION .....	56
CHAPTER SEVEN.....	64
7. STRENGTH AND LIMITATION OF THE STUDY.....	64
7.1. Strength of the Study.....	64
7.2. Limitation of the study .....	64
CHAPTER EIGHT .....	65
8. CONCLUSION .....	65
CHAPTER NINE .....	67
9. RECOMMENDATION .....	67
REFERENCES .....	68
Annex1 .....	73
Annex 2 .....	76

## List of Tables

Title	Page No
<b>Table: 1-</b> Socio demographic characteristics of nurses in selected governmental hospitals of Addis Ababa, Ethiopia, 1011. -----	32
<b>Table: 2-</b> Professional related characteristics affecting implementation of nursing process in selected governmental hospitals of Addis Ababa, Ethiopia, 2011. -----	34
<b>Table: 3-</b> Percentage distributions of organizational factors affecting implementation of nursing process among nurses in selected governmental hospitals of Addis Ababa, Ethiopia, 2011. -----	36
<b>Table: 4-</b> Patient related characteristics affecting implementation of nursing process in selected governmental hospitals of Addis Ababa, Ethiopia, 2011 -----	38
<b>Table: 5-</b> Percentage distribution of nurses' knowledge about nursing process among nurses in selected governmental hospitals of Addis Ababa, Ethiopia, 2011-----	40
<b>Table: 6-</b> Percentage distribution of nursing skills of nurses while caring their patient in selected governmental hospitals of Addis Ababa, Ethiopia, 2011-----	42
<b>Table: 7-</b> Association of implementation of nursing process by selected variables among nurses working in selected governmental hospitals of Addis Ababa, Ethiopia, 2011. -----	46

## List of Figures

Title	Page No
<b>Figure: 1-</b> A conceptual framework showing the factors affecting implementation of nursing process and its outcome -----	20
<b>Figure: 2-</b> A schematic diagram showing selection of hospitals and nurses involved in the study-----	26
<b>Figure: 3-</b> Percentage distributions of respondents by selected governmental hospitals in Addis Ababa, Ethiopia, 2011. -----	31
<b>Figure: 4-</b> Implementation of nursing process among nurses in selected governmental hospitals of Addis Ababa, Ethiopia, 2011-----	44
<b>Figure: 5-</b> Percentage distribution of level of knowledge among nurses working in selected governmental hospitals of Addis Ababa, Ethiopia, 2011-----	44
<b>Figure: 6-</b> Percentage distribution on level of skill among nurses working in selected hospitals of Addis Ababa, Ethiopia, 2011 -----	45

## **Abbreviations**

AAU- Addis Ababa University

BLH- Black Lion Hospital

Dx-Diagnosis

ICU- Intensive Care Unit

NANDA- North American Nursing Diagnosis Association

NCP= Nursing Care Plan

NP- Nursing Process

RDDMH- Ras Desta Damitew Memorial Hospital

SPH- St. Paul Hospital

USA- United States of America

## Summary

**Background:** Nursing Process is a systematic problem-solving approach used to identify, prevent and treat actual or potential health problems and promote wellness. It has five steps- assessment, diagnosis, planning, implementation, and evaluation.

**Objective:** To assess factors affecting implementation of nursing process among nurses in selected governmental hospitals of Addis Ababa.

**Method:** A cross-sectional study was conducted on selected governmental hospitals in Addis Ababa from February-April, 2011. Both quantitative and qualitative methods were used. Purposive sampling was used for selection of hospitals. Black Lion, St. Paul, Ras Desta Damitew Memorial, and Yekatit 12 hospitals were convenient for the study. The participants were selected using simple random sampling technique. The minimum sample size was 202. Tools were given to nurse expatriate to check for its validity and adjustment was made according to the feedback obtained before pre test. Data was collected using self-administered questionnaire and in-depth interview. Data was analyzed using SPSS 16<sup>th</sup> version.

**Result:** Out of 202 sampled respondents 192 agreed to participate in the study and the response rate was 95%. One hundred two (53.1%) were females and 90(46.9%) were males. One hundred forty (72.9%) of the total respondents were working in a stressful working environment where as 31(16.1%) were working in a disorganized working environment, the remaining 21(10.9%) respondents explained their work place was negligent at a time. Thirty one (16.1%) of respondents were highly knowledgeable. From the total respondents 89(46.4%) were highly skillful. One hundred (52.1%) of respondents have implemented nursing process. From binary logistic regression model analysis those who have implemented nursing process were nurses working in a stressful working environment were 2.8(adjusted OR: 0.357, 95%CI: (0.157-0.814))

times less likely to implement nursing process than disorganized working environment adjusting for facility accessibility, knowledge, and sex. Accessibility of facilities needed for nursing care were 2.248(Adjusted OR: 2.248, 95%CI: (1.079-4.684))times more likely to implement nursing process than nurses working in an inferior facility controlling for working environment, knowledge, and sex. Highly knowledgeable respondents were 38.913(Adjusted OR: 38.913, 95%CI: (10.3-147.006))times more likely to implement nursing process than low knowledge group nurses adjusted for working environment, facility, and sex.

**Conclusion:** Nursing process implementation is affected by various factors. The study has identified organizational factors, patient related factors, and level of knowledge and skill were among those factors highly influenced nursing process implementation. This factors cause poor quality of nursing care, disorganized caring system, conflicting role, medication error and readmission with similar problem, dissatisfaction with the care patients have received, and increased mortality.

# **CHAPTER ONE**

## **1. INTRODUCTION**

### **1.1. Background**

The nursing process can be viewed as a problem-solving approach, but we do not know whether use of the whole process including care plans with interventions based on nursing diagnoses improves nurses' ability to carry out assessments(1).

Based on a nursing theory developed by Ida Jean Orlando in the late 1950's as she observed nurses in action, the Nursing Process is an essential part of the nursing care plan (1).

The Nursing Process is a systematic problem-solving approach used to identify, prevent and treat actual or potential health problems and promote wellness. It has five steps (2).

The first step of the Nursing Process is assessment, which includes the collection, organization, validation, and documentation of the data. It involves taking vital signs, performing a head to toe assessment, listening to the patient's comments and questions about his health status, observing his reactions and interactions with others (2,3).

The second step of the Nursing Process is diagnosis. Diagnosing includes analyzing the data, identifying health problems, health risks, and the strengths the patient has, and formulating the nursing diagnoses. Nursing diagnosis has also been defined by North American Nursing Diagnosis Association (NANDA) as ~~a~~ clinical judgment about an individual, a family or a community's responses to actual and potential health problems/life processes (2,3). All members of the health care team should be informed of the patient's status, nursing diagnosis, the goals and the plans for collaborative management of the patient's care (1, 2).

The third step of the Nursing Process is planning. It includes prioritizing the patient's problems and diagnoses, formulating goals and desired outcomes for the patient to meet, selecting nursing interventions to enable the patient to meet those goals, and writing the nursing orders (2,3).

Setting goals to improve the outcomes for the patient are a primary focus of the nursing process. Planning also involves making plans to carry out the necessary interventions to achieve those goals.

The fourth step of the Nursing Process is implementation. It includes reassessing the client, determining the nurse's need for assistance, implementing the nursing orders and documentation of nursing actions (2,3).

The fifth step of the Nursing Process is evaluation. Evaluation includes collecting data related to the desired outcomes, comparing the data to see if the patient's goals or outcomes desired were met, relating the nursing actions to the goals and outcomes, evaluating the status of the problem, and continuing, modifying or terminating the patient care plan (2,3)

Evaluation involves not only analyzing the success of the goals and interventions, but examining the need for adjustments and changes as well. The evaluation incorporates all input from the entire health care team, including the patient (4).

## **1.2. Statement of the Problem**

The Nursing Process is a cycle that never ends. As patient needs change, the Nursing Process allows the nurse to change the patient's plan of care to ensure that care is tailored to the patient's present needs. It involves looking at the whole patient at all times and personalizes the patient. It also forces the health care team to observe and interact with the patient, and not just become the task they are performing such as a dressing change, or a bed bath. In so doing, the process provides a roadmap that ensures good nursing care and improves patient outcomes. The nursing process is one of the most misunderstood nursing theories, and yet one of the most effective as well as practical. Many students struggle with this theory. It takes time for students and new nurses to get the hang of this process, and many fight it every step of the way, until one day a light bulb begins to burn brightly(4, 5).

Nurses are beginning to function as an important part of the multidisciplinary team, speaking to the physicians and writing progress notes on patient records. However, having this role for the betterment of the health care of the nation there independent work –nursing process do not get enough emphasis as it is written in many books (1).

Implementation of the nursing process allows Nurses for the delivery of quality nursing care within a systematic, goal-directed framework and a reasonable assurance that the individual's course along the health/illness continuum is predictable and progressive. An oversight or omission in any of the steps of this process may lead to less than optimal nursing care (6).

The nurse carries personal responsibility and accountability for nursing practice, and for maintaining competence by continual learning. The nurse maintains a standard of personal health such that the ability to provide care is not compromised. The nurse uses judgment regarding individual competence when accepting and delegating responsibility. The nurse at all times

maintains standards of personal conduct which reflect well on the profession and enhance public confidence. The nurse, in providing care, ensures that use of technology and scientific advances are compatible with the safety, dignity and rights of people (7).

Nurses have many demands on their time as they provide care and document their work in a descriptive manner. Nurses developed a care plan with special forms for each care unit in order to meet the needs of their patients (1).

Learning the steps of the process does not necessarily equip a nurse to operationalize the process. Nursing requires a strong cognitive process as well as developed skills. Most of the time nurses are not working what they have got from the class (8).

Despite their knowledge of the nursing process, certain factors limit the ability of nurses to implement it in their daily practice, including lack of time, high patient volume, and high patient turnover. The daily application of nursing process is characterized by the scientific background of the professionals involved since it requires knowledge and provides individualized human assistance. Nursing involves assisting others with basic human needs using a holistic approach, and the patient is defined as someone who needs care. In theory, the majority of nurses have knowledge of the nursing process, but they do not apply it in practice. As a result, problems identified with regard to the nursing practice, including a loss of quality care, disorganization of the service, and conflicting roles (9).

The formal nursing started in the early 1950s but the prior focus was on the prevention and curative aspect. In the curative part, nurses have been using the medical approach. This approach is continued until now especially in rural health institutions. Nursing education in under graduate program started to be given in the late 1990s aimed at developing the professional's knowledge

thereby to improve the nursing care practice. Though the knowledge of students improved the practice, still do not show a significant change (10).

Nurses comprise the key connective tissue for Ethiopia's health care. They are also the largest cadre of health-care providers in Ethiopia and function in many different roles, from traditional bedside nursing to primary health care in regional health centers. It is common to see nurses working as laboratory personnel, dentists, councilors, and social workers to accommodate the shortages (8).

Nursing process is a multipurpose approach that enables nurses to perform their activities with logical justification. It safeguards the right of both the patient and the nurse. Recently in Ethiopia clients accuse nurses due to their haphazard practice. Clinton foundation is now giving in service training for nurses working in hospitals. Following this, training nurses are trying to practice nursing process and it becomes the focus of Ministry of Health throughout the country.

Good nursing care is a critical facet of health care. It has an impact on all aspects of the business of hospitals and community care. In hospitals, it must be provided over a full 24-hour period, every day of the year. If it is not present neither patients nor other health professionals will be satisfied with the service provided (11).

Nurses frequently assert that they know they give good nursing care and that this care makes a difference to the health outcomes of patients. However, unless it is clear what nursing actions make a difference to patient care outcomes, and why, the quality of nursing care will continue to be difficult to assess (11).

The patients' perspective in assessing good nursing care is a neglected area. The patient— or consumer—is increasingly acknowledged as the focus of all activities in a quality health service. If nursing quality is to improve, it is important to use both the patients' view and nurses' conceptions

of good nursing care to develop frameworks for evaluating care. Such frameworks can also form the basis for determining that 'good nursing care' makes a difference to patient outcomes. However, for nurses and nursing it is essential that frameworks established from a definitional perspective with which other health professionals are not totally familiar do not reach conclusions that are questioned because others do not understand the basis of the instrument used (11).

Another important factor to be considered in the development of frameworks and instruments to assess good nursing care is the relationship between the quality of nursing care and the qualifications of the nursing staff providing care. For many people a nurse is a nurse. However, some research undertaken in the United States and in the UK suggests that registered nurses provide a higher quality of nursing care than other categories of nurses and untrained health workers or assistants. Cutting health care costs by replacing qualified nurses with untrained health workers is an increasing temptation in many countries with a diminishing health budget. A critical dimension to quality, therefore, is economic. The International Council of Nurses developed the theme "Quality, costs and nursing", for International Nurses' Day in 1993 (11).

Registered Nurses represent a patient surveillance system and are essential to the prevention and early detection of adverse patient events. Adverse events occur in an estimated 2.9 to 3.7 percent of acute care hospitalizations in the United States of America (U.S.A.), and it is estimated that between 44,000 and 98,000 patients die in hospitals each year as a result, with nearly half due to errors in the delivery of care. A recent systematic review of eight studies conducted in the U.S.A., Australia, United Kingdom (U.K.), and Canada revealed that the median overall incidence of in-hospital adverse events was 9.2%. From those 43.5% of the incidents were preventable and 7.2% leading to death (11).

Theoretically, if nurses fail to carry out necessary nursing care, then the effectiveness of patient surveillance may be compromised and lead to a preventable adverse patient event (13).

WHO measures shortages with nurse-to-people ratios that can vary from region to region within a country, country to country and continent to continent. In the US, the Health Resources and Services Administration (HRSA) reports that the average ratio of nurses was 858 per 100 000 people in 2005 (HRSA 2005) as compared with Ethiopia which had 21 nurses per 100 000 people (WHO 2006). The average ratio in Europe is similar to that in the US, with 847 nurses per 100 000 people in the UK (WHO 2006). The average nurse-to-population ratio in high-income countries is almost eight times greater than in low-income countries. Low availability of nurses in many developing countries is exacerbated by geographical maldistribution; there are even fewer nurses available in rural and remote areas. Factors contributing to the nursing shortage vary in different parts of the world (14). As registered nurse-to-patient ratios decrease from 1:4 to 1:10, the number of post-op surgical patient deaths climbs dramatically (15).

Decision-making is based on having the appropriate number of positions and the competencies required to ensure safe, competent and ethical care. Safety and client outcomes are primary concerns. While cost efficiency is an essential element, the need to achieve good client outcomes, through an evidence-based approach, is central in making staffing decisions (16).

The heavy workload of hospital nurses is a major problem for the American health care system. Nurses are experiencing higher workloads than ever before due to four main reasons: (1) increased demand for nurses, (2) inadequate supply of nurses, (3) reduced staffing and increased overtime, and (4) reduction in patient length of stay (17).

Nursing workload measures can be categorized into four levels: (1) unit level, (2) job level, (3) patient level, and (4) situation level. These measures can be organized into a hierarchy. The

situation- and patient-level workloads are embedded in the job-level workload, and the job-level workload is embedded in the unit-level workload. In a clinical unit, for example, numerous nursing tasks need to be performed by a group of nurses during a specific shift (unit-level workload). The type and amount of workload of nurses is partly determined by the type of unit and specialty (e.g., intensive care unit [ICU] nurse versus general floor nurse), which is the job-level workload. When performing their job, nurses encounter various situations and patients, which are determinants of the situation- and patient-level workloads (17). A heavy nursing workload seems to be related to suboptimal patient care and may lead to reduced patient satisfaction (18). Much of the research investigating the impact of nursing workload on patient safety focused on linking nursing staffing levels with patient outcomes. There is strong evidence in the literature that nurse-staffing levels significantly affect several nursing-sensitive patient outcomes (19, 20). Several studies found a significant relation between lower nurse staffing levels and higher rates of pneumonia. For example, a multisite study in California found that an increase of 1 hour worked by registered nurses (RNs) per patient day correlated with an 8.9 percent decrease in the odds of pneumonia among surgical patient (21). Another study found a significant relationship between full-time-equivalent RNs per adjusted inpatient day and rate of pneumonia: the rate of pneumonia was higher with fewer nurses (22).

As more than just staffing levels affect workload, a deeper understanding of nursing workload is required to better assess the impact of workload on patient outcomes. Later, a human factors engineering approach to nursing workload that can provide this deeper understanding of nursing workload and its causes will be described, allowing for the development and implementation of solutions aimed at reducing or dealing with workload (23).

Nurses staffing level has been shown to have a significant impact on nosocomial infections. For example, Needleman and colleagues found that among medical patients, a higher number of hours of care per day provided by registered nurses (RNs) were related to lower urinary tract infection rates. A retrospective cohort study in a neonatal intensive care unit (ICU) revealed that the incidence of *E. cloacae* infection in the unit was significantly higher when there was understaffing of nurses (24). A prospective study in a pediatric cardiac ICU found a significant relation between the monthly nosocomial infection rate in the unit and the nursing hours per patient ratio. There were more nosocomial infections when the number of nursing hours per patient day was lower (25).

Although not as strong, some evidence exists regarding the impact of nurse staffing levels on failure to rescue (death within 30 days among patients who had complications) and mortality. A study using administrative data from 799 hospitals in eleven States revealed that a higher number of hours of RN care per day were associated with lower failure to rescue rates (26). In a study of 168 nonfederal adult general hospitals in Pennsylvania found that each additional patient per nurse was associated with a 7 percent increase in the likelihood of mortality within 30 days of admission and in the likelihood of failure to rescue. An earlier study found that hospitals that had more RNs per admission had lower mortality rates (27).

Four studies found a relationship between nurse staffing and patient outcomes. One study found that having a nurse-patient ratio of less than 1:2 during evening shifts was associated with a 20 percent increase in length of stay in patients who had abdominal aortic surgery in Maryland hospitals between 1994 and 1996 (28). Researchers conducted studies in 1992 and 1994 using hospital cost reports and discharge data in New York and California, finding that more nursing work hours were associated with reduced length of stay (29). Additionally, a critical incident study

of Australian ICUs revealed that insufficient nursing staff was linked to drug administration or documentation problems, inadequate patient supervision, incorrect ventilator or equipment setup, and self-extubation (30).

Nursing workload definitely affects the time that a nurse can allot to various tasks. Under a heavy workload, nurses may not have sufficient time to perform tasks that can have a direct effect on patient safety. A heavy nursing workload can influence the care provider's decision to perform various procedures (31). A heavy workload may also reduce the time spent by nurses collaborating and communicating with physicians, therefore affecting the quality of nurse-physician collaboration (32). A heavy workload can lead to poor nurse-patient communication (33).

Several studies have shown the relationship between nurses' working conditions, such as high workload, and job dissatisfaction (34). Job dissatisfaction of nurses can lead to low morale, absenteeism, turnover, and poor job performance, and potentially threaten patient care quality and organizational effectiveness (35).

High workload is a key job stressor of nurses in a variety of care settings, such as ICUs. A heavy nursing workload can lead to distress (e.g., cynicism, anger, and emotional exhaustion) and burnout. Nurses experiencing stress and burnout may not be able to perform efficiently and effectively because their physical and cognitive resources may be reduced; this suboptimal performance may affect patient care and its safety (36).

Workload can be a factor contributing to errors. Errors have been classified as (1) slips and lapses or execution errors, and (2) mistakes or knowledge errors. High workload in the form of time pressure may reduce the attention devoted by a nurse to safety-critical tasks, thus creating conditions for errors and unsafe patient care (37).

Workload also exposes nurses to violations (deliberate deviations from those practices (i.e., written rules, policies, instructions, or procedures) believed necessary to maintain safe or secure operations). The literature on violations emphasizes the role of the social and organizational context, where behavior is governed by operating procedures, codes of practice, rules, and regulations (38).

A survey describing medical practice was administered to 315 nurses, doctors, and midwives and 350 members of the general public in the United Kingdom. The study examined two factors manipulated within nine scenarios of surgery, anesthetics, and obstetrics. The first factor, behavior, was described as an improvisation (no rule available), a violation of clinical protocol, or compliance with a clinical protocol. The second factor, patient outcome, was described as good, bad, or poor. Samples of health care providers and the general public were asked to evaluate the nine scenarios with regard to the inappropriateness of the behavior, the likelihood that they would take further action (i.e., reporting by health care provider and complaining by the public), and responsibility for the outcome (e.g., the health care professional, the patient, the protocol itself, the hospital). Results showed that violations of protocols and bad outcomes were judged most harshly. Whether outcomes were good or bad, violations were evaluated more negatively. The authors of the study warned against overreliance on procedures (or protocols) as a form of organizational defense against accidents or claims. Procedures may stifle innovation and make people less able to function in novel situations (39).

A survey of 120 nurses (59 percent response rate) in three units of pediatric hospitals to assess self-reports of violations in the medication administration process. Between 8 percent and 30 percent of the nurses reported violations in routine situations, and between 32 percent and 53 percent of the nurses reported violations in emergencies. The most frequent violations or work-around occurred

in matching the medication to the medication administration record and checking the patient's identification.

### **1.3. Significance of the Study**

Nursing process implementation could be highly influenced by different factors that can lead to Poor quality of nursing care, disorganization of the service, conflicting roles, medication error, poor diseases prognosis, readmission, dissatisfaction with the care provided, and increased mortality. These problems are manageable if a nurse can properly implement nursing process. This study identified how the factors affecting implementation of nursing process performed by nurses apply its influence on the nursing practice in Black Lion Hospital (BLH), St. Paul Hospital (SPH), Ras Desta Damitew Memorial Hospital (RDDMH), and Yekatit 12 Hospital. The results of the study will be used as base line information to design appropriate intervention strategies for the factors that can influence nurses' capacity to conduct nursing process for their patients (40).

## **CHAPTER TWO**

### **2. LITERATURE REVIEW**

The nursing process has been traditionally used in the patient–nurse relationship. However, other applications of the process are documented. Qualey (1997) applies the nursing process to the patient and the family caregiver of the patient. Adams and Gilman (2002) use the nursing process in implementing a new teaching strategy with nursing students. Wingard (2005) applies the nursing process of assessment, planning, implementation, and evaluation to patient education. Although not previously documented in the literature, the nursing process was applied to a cross-cultural clinical mentoring situation (5).

The experience acquired as nurse teacher on the nursing process has generated frequent relations with care practice in the hospital context. Thus, it could be verified that the nursing activities performed in patients were focused on already established procedures and routines, with no reference to theoretical principles and how to put the nursing process into practice (40, 41).

Some scholars have recently shown the investments made to use the nursing process in care practice, providing information on what nurses know, believe and adopt in various situations and difficulties encountered in hospitals. These studies indicate the potential of investments in its practice, by approaching nursing practice and health care, education and research (5).

Based on the above, we reaffirm the researchers' view that the nursing process is an action full of meaning that can be used by nurses in practice, as a method for care delivery, which represents challenges in education and in practice. The nursing process needs to be depended in the hospital context, based on the perception of nurses working there, highlighting their doubts, uncertainties and questions about how to put it into operation (3)

Yet hospitals confront challenges with regard to nursing involvement, including: scarcity of nursing resources; difficulty engaging nurses at all levels—from bedside to management; growing demands to participate in more, often duplicative, and quality improvement activities. The burdensome nature of data collection and reporting; and shortcomings of traditional nursing education in preparing nurses for their evolving role in today’s contemporary hospital setting(44). Because nurses are the key caregivers in hospitals, they can significantly influence the quality of care provided and, ultimately, treatment and patient outcomes. Consequently, hospitals’ pursuit of high-quality patient care is dependent, at least in part, on their ability to engage and use nursing resources effectively, which will likely become more challenging as these resources become increasingly limited (43).

In recent years, emphasis on improving the quality of care provided by Brazilian national hospitals has increased significantly and continues to gain momentum. Because nurses are integral to hospitalized patients’ care, nurses also are pivotal in hospital efforts to improve quality. As hospitals face increasing demands to participate in a wide range of quality improvement activities, they are reliant on nurses to help address these demands (5).

Gaining a more in-depth understanding of the role that nurses play in quality improvement and the challenges nurses face can provide important insights about how hospitals can optimize resources to improve patient care quality (44).

Quality improvement is not a new concept for hospitals. Hospitals have had quality improvement departments and employed related staff for many years. What is new, however, is the proliferation of these activities and the escalating pressure on hospitals to participate (44).

Nurses are ~~the~~ largest deliverer of health care in the U.S.,” according to a representative of an accrediting organization, and as hospital participation in quality improvement activities increases,

so does the role of nursing. Universally, respondents described how vital nurses are to hospitals; that nursing care is a major reason why people need to come to a hospital. As one hospital, CEO said of nurses, they are the “heart and soul of the hospital” (45).

Respondents reported that nurses are well positioned to serve on the front lines of quality improvement since they spend the most time at the patient’s bedside and are in the best position to affect the care patients receive during a hospital stay. As one hospital CNO noted, “Nurses are the safety net. They are the folks that are right there, real time, catching medication errors, catching patient falls, recognizing when a patient needs something, avoiding failure to rescue.” Other respondents described nurses in similar veins as the “eyes and ears” of the hospital and being in a particularly good position to positively influence a patient’s experience and outcomes. The scarcity of nurses is a major challenge for hospitals because it impacts not only their ability to provide nursing coverage for patient care, but also to provide adequate nursing resources for other key activities, such as quality improvement. Nurses usually have multiple patients and meeting all of their physical and emotional needs is challenging, if not impossible. Consequently, nurses continually evaluate what needs to be done, reprioritizing their tasks to meet patients’ changing needs (46).

The model steps of the nursing process proposed include assessment, diagnosis, planning, implementation, and evaluation of nursing activities. The nursing history is a systematic guide for data assessment that permits the identification of nursing problems. The nursing diagnosis identifies the needs that require care and determines the degree of dependence on nursing care. The nursing intervention involves determining the overall nursing care that should be established based on the diagnosis. The nursing implementation includes the beginning and completion of actions required to achieve results, which involves the implementation and recordation of the

interventions performed. Finally, the nursing evaluation is a daily report of the successive changes that occur while under professional assistance. At this stage, it is possible to assess the human response to the nursing care provided (5)

However, a study that investigated the meaning of nursing process among nurses in an intensive care unit showed that their experiences were contradictory: although the nursing process was seen as a form of professional recognition with regard to its role in society. Something that allows nurses to have authenticity and freedom of action in their practice, it was also viewed with feelings of anger, dissatisfaction, and frustration (45).

Despite their knowledge of the nursing process, certain factors limited the ability of nurses to implement it in their daily practice, including lack of time, high patient volume, and high patient turnover. Despite these hurdles, the daily application of the nursing process is characterized by the scientific background of the professionals involved since it requires knowledge and provides individualized human assistance (9).

The activities of nurses are technical and administrative in nature. Nursing involves assisting others with basic human needs using a holistic approach, and the patient is defined as someone who needs care. In theory, the majority of nurses have knowledge of the nursing process, but they do not apply it in practice. As a result, problems identified with regard to the nursing practice, including a loss of quality care, disorganization of the service, and conflicting roles (44).

Furthermore, a study developed in a Brazilian private hospital showed that the phases of the nursing process were not integrated and that there was a lack of coherence in the prescribed

actions related to patient health conditions. They additionally asserted that a lack of preparedness and a lack of a holistic view has hindered the perception and record of the essential care provided (44).

One of the barriers to the development of the nursing process is the implementation of the nursing diagnosis. However, studies have shown that the implementation of the nursing diagnosis is a challenge for nurses (46). An evaluation of the implementation of the nursing diagnosis highlighted the importance of the survey of needs, and of the mobilization of resources to meet those needs. This included the technical resources required to provide structural resources and the time required to participate in ethics and policy training, which promote enhanced knowledge and creative potential. Taken together, these factors support positive assessment and allow its continuity (6).

After a gradual increase in their theoretical–practical training during the implementation of the nursing diagnosis, nurses reported a positive change in their feelings after their initial discomfort and unfavorable perception of the nursing diagnosis. Besides allowing the nurses to share their feelings, decisions, and responsibility for the outcomes, this stepwise approach to the nursing process allowed them to believe that they would be able to overcome difficulties (7).

It is reasonable to conclude that the nursing process is important for the practice of nursing; however, its use is not an easy task. Therefore, a continuous evaluation of how the nursing process is executed within the health services is required (41).

A majority of the studies on nursing workload and patient safety used nurse-patient ratio as the measure of nursing workload. According to research on workload in human factors engineering

it is well known that workload is a complex construct, more complex than the measure of nurse-patient ratio (17). It is unlikely that the multidimensional, multifaceted structure of workload can be captured by one unique, representative measure. Therefore, the belief is that researchers who use the nurse-patient ratio as a measure of workload offer a limited contribution to understanding the impact of nursing workload and designing solutions for reducing or mitigating nursing workload. One reason for the extensive use of the nurse-patient ratio may be that this measure is easy to use and is readily available in existing databases. However, tools used by human factors researchers can comprehensively assess workload, facilitate the identification of the sources of excessive workload, and provide direction for corrective interventions (17).

A study conducted in Europe to test the establishment of a validated model of nursing records aimed to promote individual care. The results showed limitations of the nursing process conducted according to the model, particularly in the identification of problems presented by the patients and, consequently, diagnosis and the possible intervention procedures. A study conducted in the United Kingdom to assess whether data obtained from nursing records could be reliably used to identify interventions for patients who had suffered acute myocardial infarction or a fracture of the head of the femur, showed that the analyzed nursing records did not provide an adequate picture of patients' needs for nursing interventions (47).

An investigation of the steps of the nursing process actually implemented in the routine of a university hospital showed that all phases were performed however, problems were identified in the nursing process, involving recording the history and implementing nursing prescription. The evolution of expected results, in particular, was not adequately recorded (48).

Specifically seeking to investigate the phases of the nursing process performed in the care practice of a university hospital in Brazil, the authors identified the implementation of all stages. However, the existence of failures was shown among the nursing diagnoses in the patients' history, as well as the implementation of nursing prescriptions without recording the evaluation of the expected results (6). Similar results were also shown in a study published in 2006 during the implementation of the nursing diagnosis, in which the research subjects indicated difficulties in developing the nursing process at all stages, and the need for changes to speed up the work process and optimize the quality of actions in care and education (7). This research was done in University hospital where students are doing clinical practice. Students who attached in those hospitals learn from patient records but if there is no full implementation of nursing process, they cannot obtain what they should get from patient record. Furthermore, the patient care outcome might be poor which results into poor quality of life. Poor quality of life of an individual is one determinant factor for family disturbance. Family health will be impaired and societal problem become complicated.

## Conceptual Frame Work

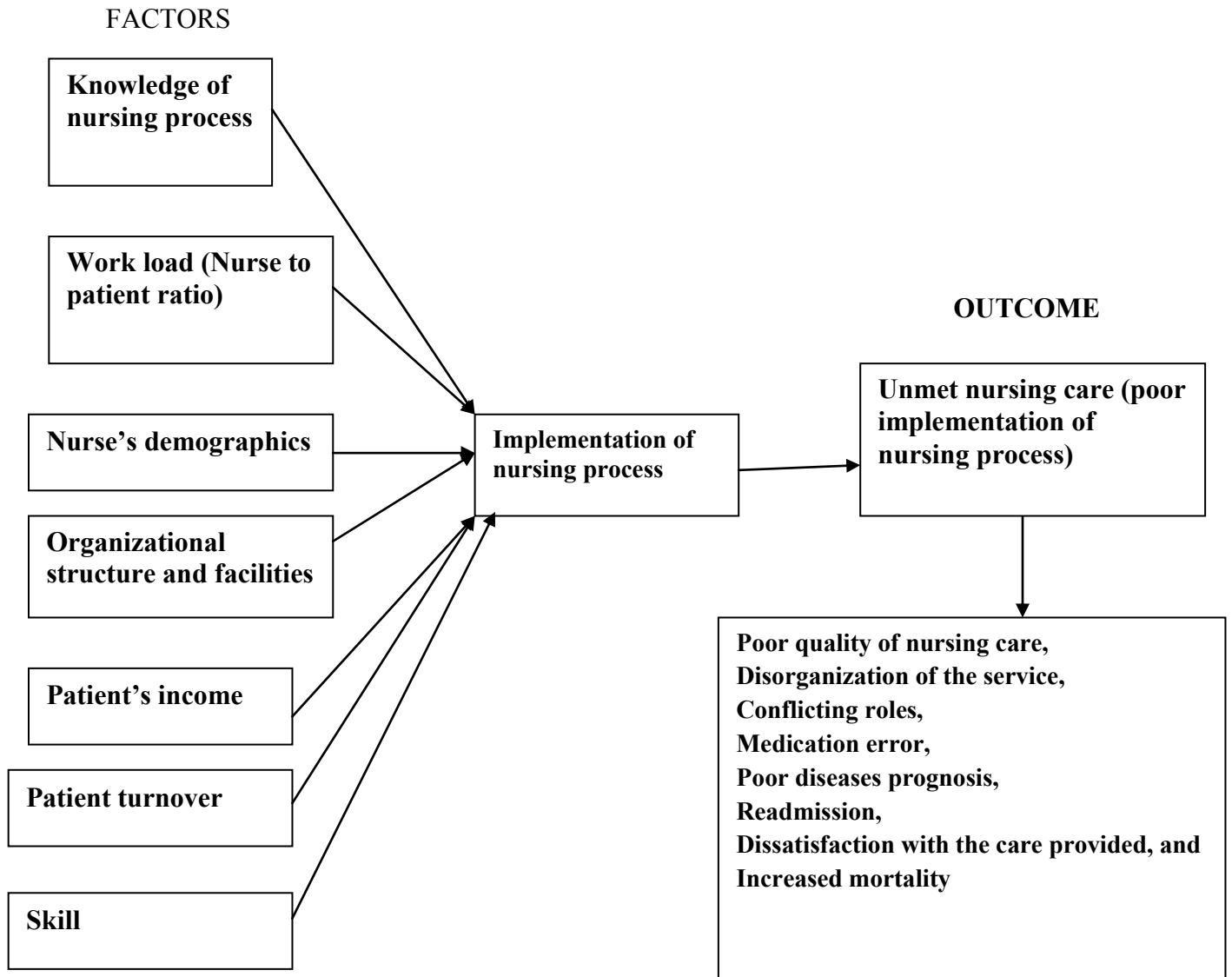


Figure: 1 A conceptual framework showing the factors affecting implementation of nursing process and its outcome

Nursing process implementation is affected by different factors. Among those knowledge of nursing process, work load (nurse to patient ratio), nurse's demographics, organizational structure and facilities, patient's income, patient turnover, and skill were identified using the literature review used in this study. When these factors negatively affect implementation of nursing process there will be unmet nursing care (poor implementation of nursing process). As a result of this poor quality of nursing care, disorganization of the service, conflicting roles, medication error, poor diseases prognosis, readmission, dissatisfaction with the care provided, and increased mortality will be resulted.

## **CHAPTER THREE**

### **3. OBJECTIVES**

#### **3.1. General Objective**

To assess factors affecting implementation of nursing process among nurse in selected governmental hospitals of Addis Ababa.

#### **3.2. Specific Objectives**

1. To assess factors associated with knowledge and practice of nurses on implementation of nursing process in selected governmental hospitals.
2. To identify organizational factors affecting implementation of nursing process in selected governmental hospitals.
3. To assess the impact of poor implementation of nursing process on patients outcome in selected governmental hospitals.

## **CHAPTER FOUR**

### **4. METHOD AND MATERIAL**

#### **4.1. Study Area**

The study was conducted in four selected governmental hospitals in Addis Ababa - the capital city of Ethiopia. It is the largest city in Ethiopia, with a population of 3,384,569 according to the 2007 population census in an estimated area of 530.14 square kilometer. People from different regions of Ethiopia populate the city. There are 12 governmental hospitals among them BLH, SPH, Yekatit 12, RDDMH provides multi-dimensional aspects of care to clients who need health care service. The study was conducted from February-April, 2011

#### **4.2. Study Design**

A cross-sectional study was conducted using quantitative and qualitative methods from February-April 2011.

#### **4.3. Source Population**

All nurses who have been working in Addis Ababa hospitals.

#### 4.4. Study Population

BSc nurses those who were working in selected hospitals of Addis Ababa during the study period.

#### 4.5. Eligible Criteria

##### 4.5.1. Inclusive

- a. All BSc nurses with more than 6 months of working experience.
- b. Nurses who were willing to participate in the study.

##### 4.5.2. Exclusive Criteria

- a. Diploma clinical nurse
- b. BSc nurses served less than six months

#### 4.6. Sample Size Determination

**Qualitative:** Point of information redundancy or saturation was the sample size.

**Quantitative:** The overall minimum sample size was determined using single population proportion calculation formula:

$$n_i = \frac{z_{\alpha/2}^2 (p(1-p))}{d^2}$$

Where n= minimum sample size required for the study

Z= standard normal distribution (Z=1.96) with confidence interval of 95% and  $\alpha=0.05$

P=prevalence/ population proportion (p=0.5)

d= is a tolerable margin of error (d=0.05)

$$= 1.96(1.96) (0.5(1-0.5))/0.05(0.05) = 384.16 \Rightarrow n_i = \underline{\underline{384}}$$

This calculated result was more than the total population we had in the study area. To get sample from the total population we used correction formula. The exact sample size therefore was calculated as follows.

$$n_f = \frac{n_i \times N}{n_i + N} \quad \text{Where } n_i = \text{calculated sample size}$$

$n_f$  = exact sample size

N= sample population

$$= (384 \times 354) / (384 + 354) = 135,936 / 738 = 184.19 = 184$$

$$= \underline{\underline{184 + 10\% \text{ none response rate} = 184 + 18.4 = 202.4}}$$

$$= \underline{\underline{202}}$$

#### 4.7. Sampling Procedure

Selection of hospitals for the study was carried out using purposive sampling. After all hospitals in the city were identified, governmental hospitals were purposely selected.

From the total 30 hospitals in the city 12 found to be governmental (four owned by Federal Ministry of Health, five owned by Addis Ababa regional health bureau and one owned by Addis

Ababa University(Ministry of Education), one owned by federal police and one by ministry of defense) two owned by NGO's and the rest 16 were privately owned.

From the 12 governmental hospitals in the city BLH, SPH, RDDMH, and Yekatit 12 were selected for the study based on the general service they have been provided. Alert, St. Peter, Amanuel, and Gandhi hospitals were excluded since they provided special service. This might influence the result to lay into segments of information that could be difficult to manage. Police and Bella hospital also excluded by their service they provide to a specific population. From the remaining hospitals BLH, SPH, RDDMH, and Yekatit 12 hospitals were selected by their high number of nurses and their appropriate location.

Simple random sampling method has been used to select the participants. According to the data obtained from the selected hospitals there were 126, 100, 59, and 69 BScN nurses in BLH, SPH, RDDMH, and Yekatit 12 hospital respectively. There were a total of 354 BScN nurses.

For the hospitals to proportionate the number of study subject using  $nf/N \times n$

$$BLH = (202 \times 126) / 354 = 71.89 = 72$$

$$SPH = (202 \times 100) / 354 = 57.06 = 57$$

$$RDDMH = (202 \times 59) / 354 = 33.66 = 34$$

$$Yekatit\ 12 = (202 \times 69) / 354 = 39.3 = 39$$

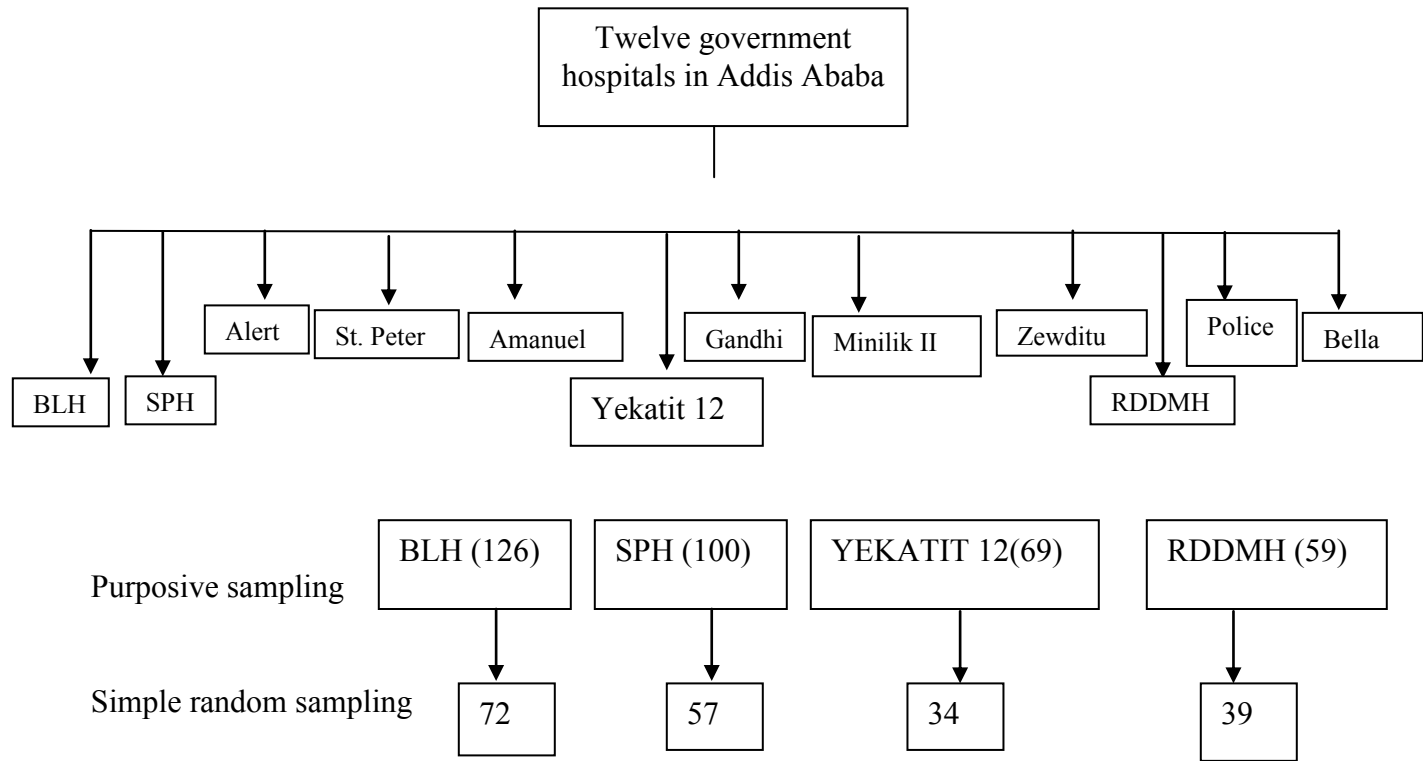


Figure: 2- A schematic representation of sampling method

#### 4.8. Data Collection Tools

There were two types of questionnaire for quantitative and qualitative

For quantitative method of data collection structured questionnaire was used. Structured English version questionnaire was prepared by using literature review used in this study and related studies done in other countries. It includes five main parts about nurses' socio demographics, knowledge of nursing process, work load (nurse to patient ratio), organizational structure and facilities, patient turnover and patient's income

For qualitative aspect of the study, open-ended questions were prepared to guide an in-depth interview.

## **4.9. Method of Data Collection**

The quantitative data was collected by self administered questionnaire. The data collection process was supervised by the principal investigator from February-April/2011. Before the actual data collection, data collectors have obtained half day training about the aim of the study and the content of the instrument. Therefore, the data collectors became familiar about each question. It was also a mechanism of minimizing bias during the process of data collection. Questionnaires were filled by nurses in their work place.

Qualitative questionnaire includes five questions about factors affecting implementation of nursing process which was not investigated with the quantitative method.

## **4.10. Variable**

### **4.10.1. Dependent**

Implementation of nursing process

### **4.10.2. Independent**

- ✓ Year of experience
- ✓ Knowledge of nurses
- ✓ Nurse to patient ratio
- ✓ Nurse demographics
- ✓ Hospital organizational structure
- ✓ Patient turn over
- ✓ Skill

#### **4.11. Operational Definition**

**Nursing process:** A systematic way of problem solving including (assessment, diagnosis, planning, implementation and evaluation) practiced by licensed nurses.

**Year of experience:** Number of year nurses have worked in nursing.

**Nurse to patient ratio:** The proportion of nurses to the patients.

**Knowledgeable nurse:** Nurses' awareness about nursing process. Highly knowledgeable nurses were those answered more than 80% of the questions, moderately knowledgeable nurses were those answered in between 55-79.9%, and low knowledgeable group were those scored <55%.

**Patient turnover:** A patient visiting hospitals for getting health care and leave before full provision of care

**Workload:** Increased working activity of nurses over their capacity.

**Organizational structure:** The hierarchical level of a hospital in health care delivery.

**Skill:** Daily nurses practice performed for a patient. Those respondents who have scored  $\geq 26$  were highly skillful, 18-25 were moderately skillful, and  $\leq 17$  were low skillful group out of 30.

#### **4.12. Data Quality Assurance**

During data collection, both principal investigator and data collectors themselves were checked data for its completeness and missing information at each point. Further more data was checked during entry into the computer before analysis.

### **4.13. Reliability and Validity of Data Collecting Instruments**

There were two nursing expatriates checked the instrument for the content validity. According to their advice, the comments were accommodated before data collection.

### **4.14. Data Analysis**

#### **4.14.1. Quantitative**

Data first was cleared, coded and entered into computer using epinfo and exported into SPSS16<sup>th</sup> version for analysis. The univariate analysis such as percentage and frequency distribution of different characteristics of the questionnaire were analyzed. Bivariate analysis was used to see the association of independent with the dependent variable. Logistic regression model was employed to control confounding variables, variables included in the model were restricted to those significantly related to implementation of nursing process at the bivariate level and some of the statistical test like, odds' ratio(crude & adjusted) was used to measure their association and some of the results were compared with results of other studies available.

#### **4.14.2. Qualitative**

Data from an in-depth interview was transcribed by arranging the record according to forwarded questions. Then comparison was done on the responses of different nurses to identify similarities and differences and the reasons behind the gap. At last, information was linked and analyzed to its congruence with data obtained through an interview.

#### **4.15. Pretest**

The questionnaire was pre tested for the relevance of dependent and independent variables to avoid any confusion during actual data collection period. The principal investigator was checked 11(5%) nurses response one week prior to the actual data collection period in Mahtem Ghandi Memorial Hospital, Addis Ababa. This was helpful for the investigator to screen out vague questions and modify some of the question item as soon as possible.

#### **4.16. Ethical Consideration**

Paper of approval and letter of permission was obtained before the beginning of data collection from departmental review board of Nursing and Midwifery, College of Health Science, Addis Ababa University. Permission letter was provided to selected hospitals for proceeding data collection. After that participants were oriented about the purpose and procedure of data collection, and that confidentiality and privacy was ensured. It was also cleared that participation was fully based on the willingness of participants using written consent.

#### **4.17. Dissemination of Result**

The study result will be disseminated through AAU website, AAU nursing library, each hospitals included in the study, international journals, Ethiopian Nursing Association, and Ministry of Health.

## CHAPTER FIVE

### 5. RESULT

#### 5.1. Quantitative Study Result

Out of 202 sampled respondents in the selected hospitals during the study period 192 agreed to participate and the response rate was 95%. The majorities of respondents were from BLH 72(37.5%) followed by SPH 58(30.2%), RDDMH 32(16.7%), and Yekatit 12 hospital 30(15.6%). The response coverage of participants by hospital is shown in the figure below.

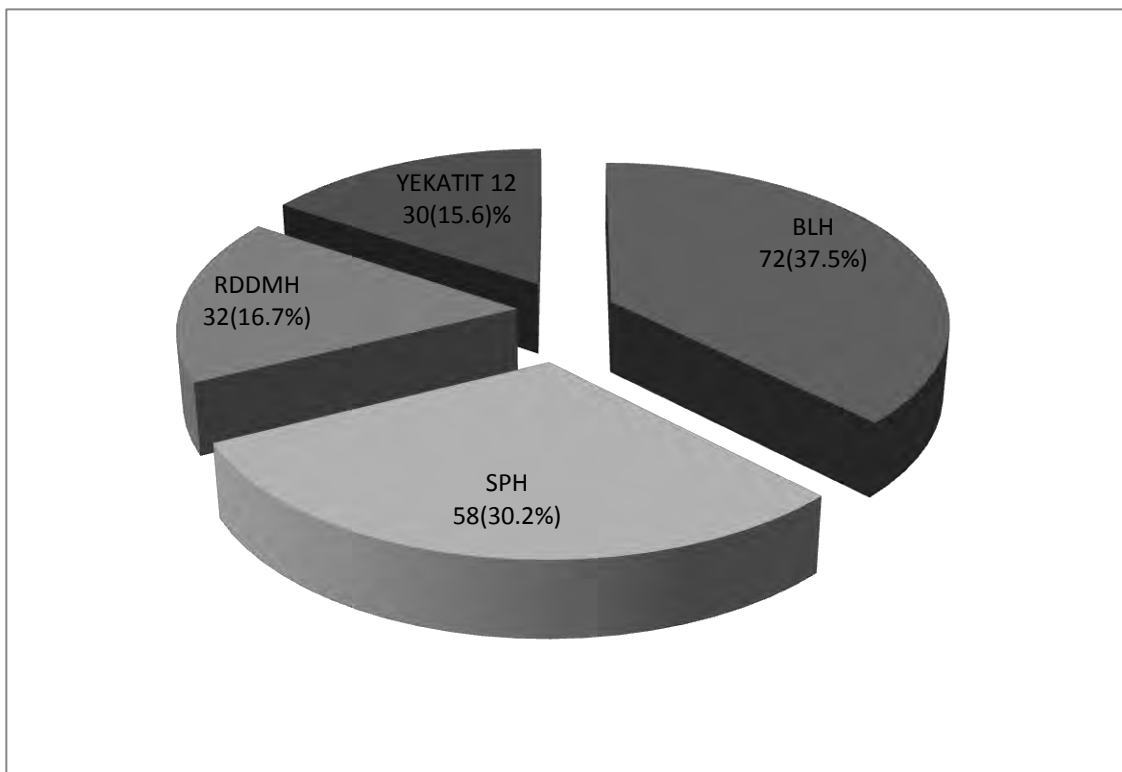


Figure: 3 Percentage distributions of respondents by selected hospitals in Addis Ababa, Ethiopia, 2011.

### 5.1.1. Socio Demographic Characteristics of the Study Subjects

**Table 1: Socio demographic characteristics of BSc nurses in selected governmental hospitals of Addis Ababa, Ethiopia, 2011.**

Characteristics		Frequency	Percentage
Sex	Female	102	53.1
	Male	90	46.9
	<b>Total</b>	<b>192</b>	<b>100</b>
Age	below24	92	47.9
	25-44	81	42.2
	45-54	17	8.9
	55-64	2	1.0
	<b>Total</b>	<b>192</b>	<b>100</b>
Marital status	Single	135	70.3
	Married	52	27.1
	Widowed	3	1.6
	Divorced	2	1.0
	<b>Total</b>	<b>192</b>	<b>100</b>
Year of graduation	<2yrs	130	67.7
	2-5yrs	57	29.7
	5-10yrs	3	1.6
	>10yrs	2	1.0
	<b>Total</b>	<b>192</b>	<b>100</b>
Work experience	< 5 years	144	75
	5-10years	23	12
	10-15 years	7	3.65
	15-20 years	9	4.69
	20-25 years	5	2.60
	>25 years	4	2.1
	<b>Total</b>	<b>192</b>	<b>100</b>

Regarding the sex distribution (Table 1) 102(53.1%) were females and 90(46.9%) were males. Ninety two (47.9%) of the respondents were in the age range of below 24 years, 81(42.2%) were in 25-44 years, 17(8.9%) were in 45-54 years, and 2(1%) were 55-64 years. Related to marital status one hundred thirty five (70.3%) of the respondents were single, 52(27.1%) were married, the remaining 3(1.6%) were widowed and 2(1%) were divorced. One hundred thirty (67.7%) of participants were graduated in the last two years. One hundred forty four (75%) of respondents had less than five years of experience.

### **5.1.2. Professionals Related Factors Affecting Implementation of Nursing Process**

Regarding overt-time work one hundred fifty seven (81.8%) of the respondents were worked overtime. One hundred thirty four (69.8%) of those who were worked overtime have worked with payment, while 23(12%) of nurses worked without payment. Only 9(5.7%) of the respondents were satisfied with the over time payment where as 148 (94.3%) were not satisfied with the payment.

One hundred seventy one (89.1%) of the respondents had no misbehavior record on their personal file while 21(10.9%) had misbehavior record.

Regarding orientation seventy seven (40.1%) of the total respondents have got satisfying orientation while they join their organization where as 115 (59.9%) of respondents did not get satisfying orientation.

Regarding on method of making work of nurses visible one hundred sixteen (60.4%), 100(52.1%), 33(17.2%), and 68(35.4%) of the respondents have used recording, nursing process, reporting to higher officials, and only working on the patient's problem to make their work visible respectively. Nine (4.7%) of the respondents have used nothing to make their work visible. From the total respondents 116(60.4%) of them were always record their activities while 4(2.1%) never recorded their activities.

In this study forty eight (25%) of respondents were anxious from high patient flow. Among those 15(31.3%), 22(45.8%), and 11(22.9%) have committed knowledge, executive, and slip/slap error respectively.

**Table: 2- Professional related characteristics affecting implementation of nursing process in selected governmental hospitals of Addis Ababa, Ethiopia, 2011.**

Characteristics		No	%	
Have physical disability		14	7.3	
Have no physical disability		178	92.7	
<b>Total</b>		<b>192</b>	<b>100</b>	
Have misbehavior record		21	10.9	
Have no misbehavior record		171	89.1	
<b>Total</b>		<b>192</b>	<b>100</b>	
Methods used to make work visible	Recording every activity	Yes	116	60.4
		No	76	39.6
		<b>Total</b>	<b>192</b>	<b>100</b>
	Nursing process	Yes	100	52.1
		No	92	47.9
		<b>Total</b>	<b>192</b>	<b>100</b>
	Reporting to supervisor	Yes	33	17.2
		No	159	82.8
		<b>Total</b>	<b>192</b>	<b>100</b>
	Working on patient's problem	Yes	68	35.4
		No	124	64.6
		<b>Total</b>	<b>192</b>	<b>100</b>
Nothing used	Yes	9	4.7	
	No	183	95.3	
	<b>Total</b>	<b>192</b>	<b>100</b>	
Frequency of documenting	Almost always	116	60.4	
	Sometimes	47	24.5	
	Every once in a while	16	8.3	
	Rarely	9	4.7	
	Never	4	2.1	
	<b>Total</b>	<b>192</b>	<b>100</b>	
Committed error	Slip/lapses	19	9.9	
	Executive	41	21.4	
	Knowledge	24	12.5	
Not committed error		108	56.25	
<b>Total</b>		<b>192</b>	<b>100</b>	

### **5.1.3. Organizational Factors Affecting Implementation of Nursing Process**

Regarding the great anxieties of nurses (Table 3) one hundred five (54.7%) of the respondents have had anxiety from nurse to patient ratio followed by rude physician challenges and unsympathetic manager with equal burden 54(28.1%) and dealing with abusive family member and everyone who did not do their job 49(25.5%). Thirty six (18.8%) and 26 (13.5%) were get strain or anxiety from harassing coworker and demanding patients respectively.

From the total respondents 104 (54.2%) of them said the dissatisfying aspect of their job was caring for so many patients followed by rules being made up without staff or residents in mind 79(41.1%) and useless paper work 40 (20.8%) and new reporting system 31(16.1%). From those dissatisfied with any reason stated above 95 (49.5%) of the total respondents were dissatisfied due to their profession (Table 3).

One hundred forty (72.9%) of the total respondents were working in a stressful working environment where as 31(16.1%) were working in a disorganized working environment the remaining 21(10.9%) respondents explained their work place as it is negligent at a time.

Regarding working hour distribution (Table 3) seventy eight (40.6%) of nurses have cared for more than 15 patients per day and 49(22.5%) were cared for 10-15 patients per day while 51(26.6%) have cared for 5-10 patients per day and only 11(5.7%) were cared for less than 8 patients per day. One forty eight (77.1%) of respondents have worked eight hours per day where as 14(7.3%) have worked more than 12 hours per day.

Eighty eight (45.8%) of the respondents have had belief of job and employee skill mismatch as the cause for employee turnover while 68(35.4%) of respondents believed that less recognition and growth opportunity were the other causes for employee turnover (Table 3).

**Table: 3-Percentage distribution of organizational factors affecting implementation of nursing process among nurses in selected governmental of Addis Ababa, Ethiopia, 2011**

Character		Frequency	Percentage	
Working hours/day	<8hrs	11	5.7	
	8hrs	148	77.1	
	12hrs	19	9.9	
	>12hrs	14	7.3	
	<b>Total</b>	<b>192</b>	<b>100</b>	
Distribution of patient flow	<8pts	14	7.3	
	5-10pts	51	26.6	
	10-15pts	49	25.5	
	>15pts	78	40.6	
	<b>Total</b>	<b>192</b>	<b>100</b>	
Availability of equipment	Available	43	22.4	
	Not available	149	77.6	
	<b>Total</b>	<b>192</b>	<b>100</b>	
Overtime work	Yes	With payment	134	69.8
		Without payment	23	12
	No	35	18.2	
	<b>Total</b>	<b>192</b>	<b>100</b>	
Satisfied with payment	Yes	9	5.7	
	No	125	94.3	
	<b>Total</b>	<b>134</b>	<b>100</b>	
Dissatisfying aspect of nursing	Caring for so many patients	Yes	104	54.2
		No	88	45.8
		<b>Total</b>	<b>192</b>	<b>100</b>
	New reporting system	Yes	31	16.1
		No	161	83.9
		<b>Total</b>	<b>192</b>	<b>100</b>
	Rules made without considering staff	Yes	79	41.1
		No	113	59.9
		<b>Total</b>	<b>192</b>	<b>100</b>
	Useless paper work	Yes	40	20.8
		No	152	79.2
		<b>Total</b>	<b>192</b>	<b>100</b>
Dissatisfied due to nursing	Yes	95	49.5	
	No	97	50.5	
	<b>Total</b>	<b>192</b>	<b>100</b>	
The greatest anxiety/ strain on nurses work place	Nurse : patient	Yes	105	54.7
		No	87	45.3
		<b>Total</b>	<b>192</b>	<b>100</b>
	Everyone one doesn't do their job	Yes	49	25.5
		No	143	74.5
		<b>Total</b>	<b>192</b>	<b>100</b>
	Dealing with abusive family	Yes	49	25.5
		No	143	74.5
	<b>Total</b>	<b>192</b>	<b>100</b>	
	Rude physicians	Yes	54	28.1
		<b>Total</b>	<b>138</b>	<b>71.9</b>

		<b>Total</b>	<b>192</b>	<b>100</b>
		Yes	36	18.8
		No	156	81.2
	Harassing coworkers	<b>Total</b>	<b>192</b>	<b>100</b>
		Yes	26	13.5
		No	166	86.5
		<b>Total</b>	<b>192</b>	<b>100</b>
	Demanding patients	Yes	26	13.5
		No	166	86.5
		<b>Total</b>	<b>192</b>	<b>100</b>
	Unsympathetic managers	Yes	54	28.1
		No	138	71.9
		<b>Total</b>	<b>192</b>	<b>100</b>
Work place	Stressful		140	72.9
	Negligent at a time		21	10.9
	Disorganized		31	16.2
	<b>Total</b>		<b>192</b>	<b>100</b>
Oriented while joining the current organization	Yes		77	40.1
	No		115	59.9
	<b>Total</b>		<b>192</b>	<b>100</b>
Effect of staff turnover	Decreasing productivity	Yes	68	35.4
		No	124	64.6
		<b>Total</b>	<b>192</b>	<b>100</b>
	Disorganized service delivery	Yes	134	69.8
		No	58	30.2
		<b>Total</b>	<b>192</b>	<b>100</b>
	Decrease spread of organizational knowledge	Yes	46	24.0
		No	146	76
		<b>Total</b>	<b>192</b>	<b>100</b>
Cause of employee turnover	Job and employee skill mismatch	Yes	88	45.8
		No	104	54.2
		<b>Total</b>	<b>192</b>	<b>100</b>
	Inferior facility	Yes	40	20.8
		No	152	79.2
		<b>Total</b>	<b>192</b>	<b>100</b>
	Less recognition	Yes	68	35.4
		No	124	64.6
		<b>Total</b>	<b>192</b>	<b>100</b>
	Less/ no appreciation	Yes	55	28.6
		No	137	71.4
		<b>Total</b>	<b>192</b>	<b>100</b>
	Less growth opportunity	Yes	68	35.4
		No	124	64.6
		<b>Total</b>	<b>192</b>	<b>100</b>
	Poor training	Yes	41	21.4
		No	151	78.6
		<b>Total</b>	<b>192</b>	<b>100</b>
	Poor supervision	Yes	28	14.6
		No	164	85.4
		<b>Total</b>	<b>192</b>	<b>100</b>

Regarding the cause of staff turnover (Table 3) one hundred thirty four (69.8%) of respondents have believed that staff turn over from a specific public health institution can obligate the organization to provide a disorganized service. Sixty eight (35.4%) of respondents had believed that staff turnover can cause decrease in productivity where as 46(24%) had believed that staff turnover can cause decreased spread of organizational knowledge.

#### 5.1.4. Patient Related Factors Affecting Implementation of Nursing Process

**Table: 4 Patient related characteristics affecting implementation of nursing process in selected governmental hospitals of Addis Ababa, Ethiopia, 2011**

Characteristics			No	%
Reason of patient turnover	Poor understanding of modern medicine	Yes	67	34.9
		No	125	65.1
		<b>Total</b>	<b>192</b>	<b>100</b>
	Poor economic status	Yes	92	47.9
		No	100	52.1
		<b>Total</b>	<b>192</b>	<b>100</b>
	Long time required to get service	Yes	94	49
		No	98	51
		<b>Total</b>	<b>192</b>	<b>100</b>
	Incurable diseases	Yes	37	19.3
		No	155	79.7
		<b>Total</b>	<b>192</b>	<b>100</b>
Influence of patient turnover on nursing care	Discharge before completing planned intervention	Yes	78	40.6
		No	114	59.4
		<b>Total</b>	<b>192</b>	<b>100</b>
	Not cooperative for their care	Yes	63	32.8
		No	129	67.2
		<b>Total</b>	<b>192</b>	<b>100</b>
	Lack of equipment	Yes	63	32.8
		No	129	67.2
		<b>Total</b>	<b>192</b>	<b>100</b>
	Present with complicated problems	Yes	75	39.1
		No	117	60.9
		<b>Total</b>	<b>192</b>	<b>100</b>

Regarding on patient related characteristics (Table 4) ninety four (49%) of the respondents informed that patients were discharged before they receive full care due to long time required to get the service. Ninety two (47.9%) of the respondents informed that patients were discharged

early before they get relief from their problem due to poor economical income. Sixty seven (34.9%) of respondents' patients were discharged before they receive the appropriate management for their illness due to poor understanding of the modern medicine while 37 (19.3%) have informed that patients were discharged early before they were treated due to their incurable illness.

Seventy eight (40.6%) of respondents were challenged to provide their nursing care due to early discharge of patients before completing the planned intervention. Seventy five (39.1%) of respondents believed that patients discharged before completing their treatment and came back to their institution with a complicated problem which was difficult to manage. Sixty three (32.8%) of respondents got challenge from patients who were discharged before finishing their treatment due to patient's inability to collect the required material for care provision. The remaining 63(32.8%) were challenged due to poor participation of patients for the improvement of their illness.

### 5.1.5. Knowledge Assessment

**Table: 5 Percentage distribution of nurses' knowledge about nursing process among nurses in selected governmental hospitals of Addis Ababa, Ethiopia, 2011.**

Characteristics	Correct Answer No (%)	Incorrect Answer No (%)	Total No (%)
1. One is not among the component of nursing process	175(91.1%)	17(8.9%)	192(100%)
2. A nurse should do one at the first step of nursing process	156(81.2%)	36(19.8%)	192(100%)
3. The Gordon approach is directly targeted at-----	102(53.1%)	90(46.9%)	192(100%)
4. Which nursing diagnosis is better to solve a patient's problem with diabetes mellitus chronic complication in the future?	136(70.8%)	56(29.2%)	192(100%)
5. What makes nursing process different from medical approach?	137(71.4%)	55(28.6%)	192(100%)
6. Among the individuals in a hospital one is not mandatory for the better accomplishment of nursing process.	101(52.6%)	91(47.4%)	192(100%)
7. One is not included under the activities to be performed in the planning phase of nursing process.	64(33.3%)	128(66.7%)	192(100%)
8. In implementation step of nursing process a nurse is expected to perform-----	108(56.2%)	84(43.8%)	192(100%)
9. One could not be a guide for evaluation of nurses performance in nursing process	112(58.3%)	80(41.7%)	192(100%)
10. Disturbed sleeping pattern related to unresolved fears and anxieties as evidenced by difficulty in falling /remain asleep. Identify the problem, etiology and sign/symptom of the above nursing diagnosis	92(47.9%)	100(52.1%)	192(100%)
11. Write one full actual nursing diagnosis	39(20.3%)	153(79.7%)	192(100%)

Regarding the knowledge assessment of nurses (Table 5) majority of respondents 175 (91.1%) have answered the correct answer, which is evidence based practice is not among the five components of nursing process while the remaining 16(8.9%) have chosen the incorrect answer one among the components of nursing process.

One hundred fifty six (81.2%) of respondents have answered correctly- collecting baseline information is the principal activity to be performed in the first phase of nursing process while the remaining 36(19.8%) have wrongly answered.

More than half of respondents 102 (53.1%) answered human response towards physiological disturbance is the focus of Gordon approach which is the correct answer whereas the remaining 90(46.9%) have wrongly answered.

One hundred thirty six (70.8%) of respondents have correctly answered as nursing diagnosis for a problem to be manifested in the future is potential nursing diagnosis while the remaining 56(29.2%) have wrongly answered.

One hundred thirty seven (71.4%) respondents have chosen the correct answer that the major difference between nursing diagnosis and medical diagnosis is the focus of nursing diagnosis towards human response than the disease process while 55(28.6%) of them answered wrongly.

One hundred one (52.6%) of respondents have believed that nurse, patient, family of the patient, and physician are mandatory for the better accomplishment of nursing process. The remaining 91(47.4%) respondents have wrongly answered that the nurse, patient, family, and physician are not mandatory for the better accomplishment of nursing process.

Sixty four (33.3%) of respondents have chosen the correct answer that was, data base of the patient could not be recorded in the planning phase of nursing process where as the remaining 128(66.7%) of respondents have wrongly answered.

One hundred eight (56.2%) of respondents correctly answered that implementing the proposed interventions in the planning phase is the expected activity to be performed in the implementation phase of nursing process and 84(43.8%) have wrongly answered.

One hundred twelve (58.3%) of the respondents knew that nursing diagnosis, collaborative problems, priorities and nursing interventions, and expected outcomes could be guidelines for evaluation of nurses performance in nursing process. The remaining 80(41.7%) respondents have wrongly answered.

Ninety two (47.9%) of respondents were able to identify the problem, etiology and sign and symptoms of a given actual nursing diagnosis. Only 39(20.3%) of respondents were able to write a full actual nursing diagnosis that have consisted of problem, etiology, and manifestations of the problem.

#### 5.1.6. Skill Assessment

**Table: 6-Percentage distribution of application of skills among nurses on caring patients in selected governmental hospitals of Addis Ababa, Ethiopia, 2011**

Character	Not at all N <sub>0</sub> (%)	Rarely N <sub>1</sub> (%)	Undecided N <sub>2</sub> (%)	Some times N <sub>3</sub> (%)	Very much N <sub>4</sub> (%)
Application of nursing theories on nursing practice	8(4.2)	11(5.7)	33(17.2)	87(45.3)	53(27.6)
Maintenance of patient dignity, privacy and confidentiality	3(1.6)	7(3.6)	21(10.9)	59(30.7)	102(53.1)
Application of principles of health and safety	5(2.6)	9(4.7)	20(10.4)	73(38)	85(44.3)
Safe administration of medicine and other therapies	3(1.6)	12(6.2)	21(10.9)	45(23.4)	111(57.8)
Consideration of emotional, physical, and personal care of the patient	11(5.7)	7(3.6)	31(16.1)	79(41.1)	64(33.3)
Respond to patient needs	8(4.2)	7(3.6)	26(13.5)	70(36.5)	81(42.2)

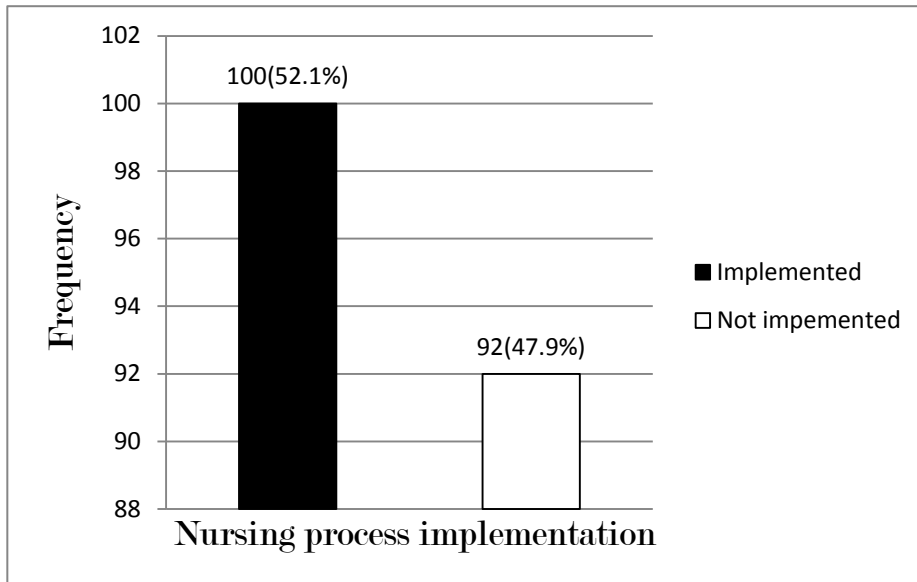
Regarding the application of nursing skills (shown on table 6) eighty seven (45.3%) of the respondents were sometimes apply theories of nursing practice while 8(4.2%) were not at all

practiced it. One hundred two (53.1%) have had very much ability to maintain patient's dignity, privacy and confidentiality (using nursing skills) where as only 3(1.6%) were not at all maintain it. Eighty five (44.3%) respondents have practiced the principles of health and safety, including moving and handling, infection control; essential first aid and emergency first aid and emergency procedures very much where as 5(2.6%) were not at all practiced it. One hundred eleven (57.8%) respondents were safely administer medicine and other therapies very much but 3(1.6%) were not at all administered. Seventy nine (41.1%) respondents have had the ability to consider emotional, physical, and personal care, including meeting the need for comfort, nutrition, personal hygiene and enabling the person to maintain the activities necessary for daily life; (using nursing skills, intervention/activities to provide optimum care). Eighty one (42.2%) respondents were able to respond to patient needs by planning, delivering and evaluating appropriate and individualized programs of care working in partnership with the patient, their care givers, family and other health workers.

One hundred (52.1%) respondents were implemented nursing process while 92(47.9%) did not implemented nursing process as shown in figure 3.

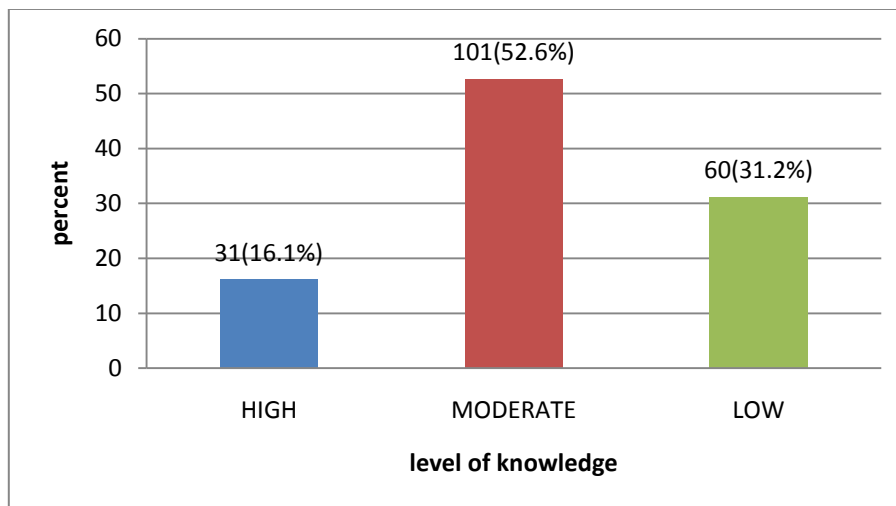
Forty three (22.4%) of the total respondents had enough equipment while they were providing care for their patient. From those 24(55.8%) and 19(44.2%) had moderately and highly skillful respectively but no one had low skill.

One hundred forty nine (77.6%) of the total respondents had no enough equipment to provide care. Of those who had no enough equipment 70(47%), 74(49.7%), and 5(3.3%) had high, moderate and low skill respectively.



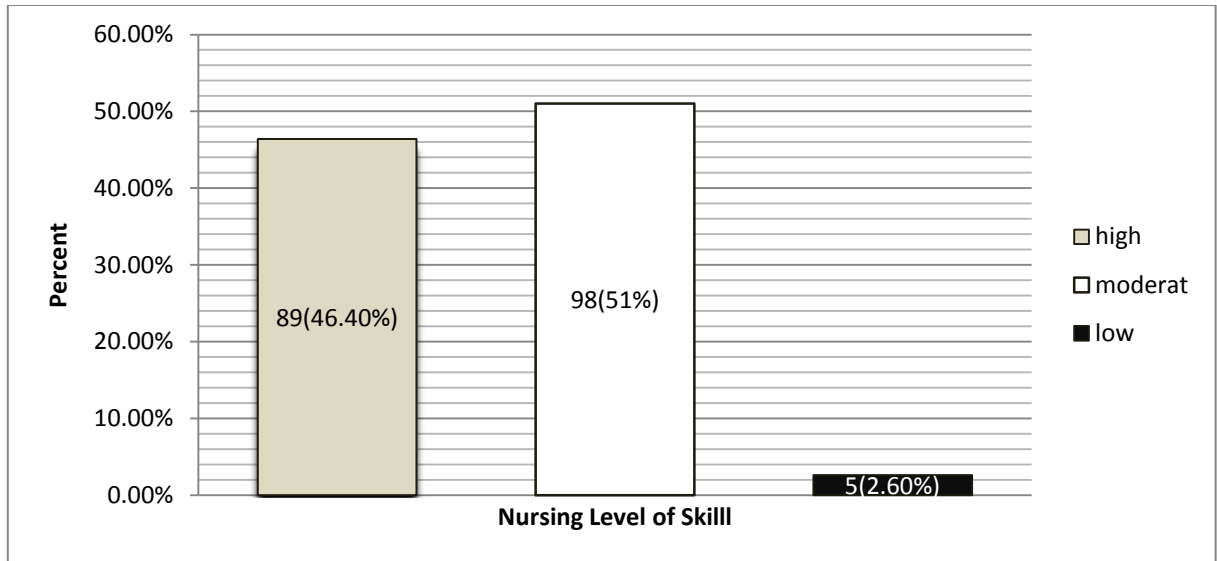
**Figure: 4- Implementation of nursing process among nurses in selected governmental hospitals of Addis Ababa, Ethiopia, 2011.**

One hundred (52.1%) of respondents have implemented nursing process while 92(47.9%) were not implemented nursing process.



**Figure: 5- Percentage distribution on level of knowledge among nurses working in selected governmental hospitals of Addis Ababa, Ethiopia, 2011.**

As it is shown in the figure above 31(16.1%) of respondents were highly knowledgeable and 101(52.6%) were moderately knowledgeable while 60(31.2%) had poor knowledge.



**Figure: 6-Percentage distribution on level of skill among nurses working in selected hospitals of Addis Ababa, Ethiopia, 2011.**

The above figure shows that 89(46.4%) of respondents were highly skillful and 98(51%) were moderately skillful while only 5(2.6%) had poor skill

### 5.1.7. Implementation of Nursing Process

**Table: 7 Association of implementation of nursing process by selected variables among nurses working in selected governmental hospitals of Addis Ababa, Ethiopia, 2011.**

Characteristics		Implementation of nursing process		Crude P-value	COR (95%CI)	AOR(95%CI)
		Yes No (%)	No No (%)			
Sex	Female	61(32.8%)	41(21.4%)	0.023	0.514(0.289-0.913)	0.712(0.361-1.407)*
	Male	39(20.3%)	51(26.6%)			
Work place	Stress full	80(41.6%)	60(31.3%)	0.014	0.357(0.157-0.814)	0.180(0.065-0.501)
	Negligent	10(5.2%)	11(5.7%)	0.266	-----	-----
	Disorganized	10(5.2%)	21(10.9%)			
Facility	Accessible	73(38%)	79(41.1%)	0.031	2.248(1.079-4.684)	3.109(1.277-7.570)
	Inferior	27(14%)	13(6.8%)			
Knowledge	Highly knowledgeable	4(2.1%)	27(6.8%)	0.000	27(7.924-91.994)	38.913(10.3-147.006)
	Moderately knowledgeable	48(25%)	53(27.6%)	0.000	4.417(2.1-9.289)	4.913(2.178-11.084)
	Low knowledgeable	48(25%)	12(41.1%)			

*\*sex significant variables in the crude were omitted from multivariate analysis*

Regarding association of implementation of nursing process with selected variables (Table 7) sixty one (32.8%) of female and 39(20.3%) of male respondents were implemented nursing process giving a total of 100 (52.1%) respondents. Out of one hundred respondents who were implemented nursing process 80(41.6%) were working in a stressful working environment,

10(5.2%) were worked in a neglecting environment, and 10(5.2%) were worked in a disorganized environment. Seventy three (38%) were implemented nursing process without facility shortage while 27(14%) were implemented with an inferior facility. Among those implemented nursing process only four nurses were highly knowledgeable and equal number of respondents 48(25%) were moderately and poorly knowledgeable.

From binary logistic regression analysis shown in table 7 being a female were negatively and significantly associated with implementation of nursing process than male (COR: 0.514, 95%CI :( 0.284-0.913), p: 0.023).

From the characteristics work place, nurses who were working in a stressful environment were 0.357 times significantly and less likely to implement nursing process than those worked in a disorganized environment (COR: 0.357, 95%CI (0.157-0.814), P: 0.014). Neglecting working environment had no significant association with implementation of nursing process.

Working in a hospital with high facility were 2.248 times significantly and more likely to implement nursing process than those working in an inferior facility (COR: 2.248, 95%CI: (1.079-4.684), P: 0.030).

Highly knowledgeable nurses were 27 times more likely and significantly associated with implementation of nursing process than low knowledge group nurses (COR: 27, 95%CI: (7.924-91.994), P: <0.001). Moderately knowledgeable nurses were positively and significantly associated with implementation of nursing process (COR: 4.417, 95%CI: (2.1-9.289), P: <0.001).

In a multivariate analysis (multivariate logistic regression) shown in table 7 nurses working in a stressful working environment were 0.357(adjusted OR: 0.357, 95%CI: (0.157-0.814)) times less likely to implement nursing process than disorganized working environment adjusting for facility

accessibility, knowledge, and sex. Accessibility of facilities needed for nursing care were 2.248(Adjusted OR: 2.248, 95%CI: (1.079-4.684))times more likely to implement nursing process than nurses working in an inferior facility controlling for working environment, knowledge, and sex. Highly knowledgeable and highly skillful, moderately skillful, and poorly skilful accounting 19,11, and 1respectively were 38.913(Adjusted OR: 38.913, 95%CI: (10.3-147.006))times more likely to implement nursing process than low knowledge group nurses adjusted for working environment, facility, and sex. Moderately knowledgeable were 4.913(Adjusted OR: 4.913, 95%CI: (2.178-11.407)) times more likely to implement nursing process than low knowledge group nurses adjusted for work place, facility, and sex. The characteristics sex was significantly associated with implementation of nursing process but it is not significantly associated when it is adjusted with knowledge, facility, and work place.

## **5.2. Qualitative Study**

### **5.2.1. Qualitative Study Result**

A total of seven respondents were participated in the interview. The respondents' age range was in between 22-42 years and most of the respondents were staff nurses in responsibility. The respondent opinion and experience was written as follows:

→Nursing process in our hospital is not well known and nurses do not want to implement it due to high patient flow and lack of adequate knowledge about the concept. Negligence of higher officials in hospitals makes nursing process a useless principle. Professionals themselves are not conscious to implement nursing process because of knowledge and practice mismatch. The knowledge nurses obtained from school is not tailored to the actual practice. For example, the knowledge I obtained within three months practice in work place is better than three years university training for my current nursing practice. Sometimes it is not the perception of the community that limits nursing only to the art but nurses themselves are not sensitive to maintain professional value and they also keep idle to update themselves specially nurses worked for many years. They are fatigued to implement nursing process rather they are complaining on the current practice by recalling the past which had better payment. The cause for this could be absence of in service training, poor sense of professionalism, attitude of the community and professionals, and absence of appropriate curriculum to the country's health problem. Due to all the above reasons nursing become a neglected profession in Ethiopia.”

**A 22 years old male staff nurse with 8 months experience**

→Nursing is my identity. So if any one tries to undermine nursing I will scarify even my life because nursing is everything of my life. It is the reason for my husband, my children, and my house at all. Nursing was a highly recognized profession previously but later on it becomes

neglected. The reasons I suspect are: (1) lack of commitment of professionals (2) training system (3) poor payment which is not enough for the service. The training system is pivotal for a profession for example the requirements to be a candidate nurse student have no any hurdle. So that recently everyone is joining nursing and it become dispensable like commodity. I agree that nursing process can return the good time of nursing by equipping us with our own care delivery system. The reason for poor implementation of nursing process in hospitals is not work load but it is lack of knowledge and commitment. Nurses do not believe that nursing process could bring any observable change. The absence of good foundation of nursing makes nurses to shift their profession in to other fields. Previously there was no nursing process implementation so nothing is obtained from old nurses.”

**A 42 years old female head nurse with 18 years experience**

–Upgrade nurses are resistant to change. They only want the previous system to be continued. This problem may be emanated from poor training while they upgrade themselves into their current position. Increased workload obligates nurses in our hospital to focus on implementation part of nursing process without documenting the preceding steps. When we retrospectively observe the history of nursing process in Ethiopia it has not been implemented starting from the initial. The other factor that hinders implementation of nursing process in our unit is poor supervision. Supervisors are from one unit controlling the whole units of the hospital. They are not oriented about the nature of each unit. Most of the time supervisors come to our unit to supervise and check what we have documented but they only observe whether there is written information on the prepared sheet regardless of the content documented. Documenting habit of nurses is highly significant factor which can affect implementation of nursing process. Some of my colleagues said we have documented throughout our career of nursing but we cannot bring any change on the health status of the society as well our life. There is no lack of knowledge to

implement nursing process rather professionals commitment limits them to implement it. Aging of nurses couldn't be a factor which can limit implementation of nursing process. In the contrary nurses will develop experience and make caring system easy.”

**A 26 years old male staff nurse with 2 years experience**

—There could be many factors affecting implementation of nursing process. In our hospital particularly in my unit the most challenging factors are :( 1) decreased nurse to patient ratio for example there are 10 nurses for 40 patients in our wing which means one nurse for eight patients. (2) The format we used now focuses on public problems than the focus of nursing in hospitalized patients. (3) Knowledge deficit. Most of the time nurses who have served for many years have poor information updating habit. (4) Long time occupancy. This is because patients' inability to pay for medical services timely. (5) Poor recording habits. It is common among nurses who have been working for many years due to adaptation with the hospital environment. (6) Job and skill mismatch. Therefore nurses are exhausted from daily routine activities which need immediate and long term intervention.”

**A 23 years old male staff nurse with 9 months experience**

—I have implemented nursing process only while I was in university. After I join this hospital there is nothing that initiates me to implement it. Higher officials are not aware of the importance of nursing process. Furthermore, nurses themselves cannot show the importance for the improvement of patients' problem. Professionals are highly exhausted from high patient flow. High patient flow causes time shortage to care the patient. Due to this nurses are obligated only to perform following the instruction of physicians. Nurses have forgotten knowledge of nursing process due to long time working experience without implementing it. Additionally, nurses are not committed to perform nursing process. This is due to the culture developed in hospitals, lack of facilities, structure of hospitals, and payment we get.”

**A 27 years old female staff nurse with 4 years experience**

–In our hospital it seems as if nurses have no knowhow about nursing process. I said it because of the habit of nurses‘ inspiration to deal about nursing process. This leads to poor/ absence of implementation of nursing process. This is due to absence of encouraging working environment that can initiate nurses to implement nursing process. It is obvious that nurse‘ s independent role is not separately known. So that nurses follow physician‘ s decision. If nurses‘ independent role were distinctly known, nurses would have take their responsibility and become accountable for their actions. For example, a patient ready for surgery will enter to Operation Theater if he/she can tolerate anesthesia prescribed by the anesthesiologist and administered by anesthetist without considering the role of nurses. Additionally, Lack of knowledge took its own part for poor implementation of nursing process. Nurses have no enough knowledge to assess & identify patients‘ problem and plan & implement the appropriate management. Sometimes there is unfamiliarity with instruments. This unfamiliarity might be lack/ inappropriate training. For example, I have attended different trainings focused on how to assist physicians than the way to perform independent role. Additionally, nurses training system is general but it needs specialization. It makes nurses to have superficial knowledge.”

**A 24 years old male staff nurse with 1 year experience**

–The life of nursing is build upon caring. So to maintain the professions value we shall to implement nursing process. Only the name of nursing process is known in our hospital but no one tries to implement it. Poor implementation of nursing process is a historical practice we have inherited from our seniors. They were not implementing it rather serving the physician by leaving their independent role apart. We are also practicing the habit that come down to this generation.

Knowledge management is the other factor influencing implementation of nursing process. A BSc and diploma holder nurses are practicing on similar set up. There is no a known demarcation between the role of different academic levels of nursing career. We are abused by patient relatives and physicians. Due to this we are obligated to work following the instruction from physicians.”

**A 32 years old male staff nurse with 7 years experience**

### **5.2.2. Summary of Qualitative Study Result**

The data collected from interviewees was summarized thematically by identifying the core ideas they have responded. The whole information is summarized into three themes.

#### **A. Organizational Factors**

Most of interviewees have described that hospital’s environment was not suitable for implementation of nursing process. Hospitals were not able to afford supplies needed for caring. For example, nursing process formats were not available. The available format was not the correct format to register all the components of nursing process.

Low nurse to patient ratio was the other problem that participants were described. Nurses were obligated to care for many patients beyond their capacity. In the contrary they were not obligated to record their activities in a formal way. Simply they were allowed to perform their activities following the instruction of physicians.

Higher officials were not informed the role of nurses and the benefit of nursing process on the patients’ outcome. They were only working for the successful accomplishment of medical services leaving nursing services apart.

## **B. Commitment of Nurses**

Most of the respondents described that nurses were not committed to implement nursing process.

There were several reasons that make nurses to become negligent about their responsibility.

The first reason was their experience. From their experience they were recording their activities and fighting for the betterment of nursing but nothing was changed rather the value of nursing was declining.

The second reason was absence of recognition for the highly devoted nurses. They were advocating for the patient from the beginning history of nursing in Ethiopia yet they were not considered as they could contribute anything for the health of the country.

The third reason was poor payment. Most of highly experienced nurses were complaining about the payment they have obtained by comparing the payment they were paid previously.

The fourth reason was age difference. Some have believed that aged nurses could not effectively implement nursing process. In contrast some others believed that aged nurses are highly experienced and effective in implementation of nursing process using their skill developed throughout their nursing career.

Generally, inspiration of nurses was low due to the above reasons and they were just working for food not for their profession.

## **C. Knowledge**

Most of the respondents agreed that knowledge is a determinant factor that could influence implementation of nursing process. Some respondents believed that nurses have obtained adequate amount of knowledge for caring their patients. But as nurses stayed for long time without implementing nursing process their knowledge might be depreciated. Some others believed that nurses had adequate knowledge but due to absence of suitable caring environment

nurses could not implement nursing process. Some others believed that the knowledge nurses have obtained from school varies from school to school. They have described that nurses from private schools are poorly knowledgeable with high grade. Some of interviewees have got difference between the training system of universities and the actual nursing practice.

Generally, all of respondents have agreed that nurses could improve their knowledge of nursing process if they can implement it and got in-service education targeted at nursing process.

## **CHAPTER SIX**

### **6. DISCUSSION**

The study tried to assess factors affecting implementation of nursing process among nurses working in selected government hospitals of Addis Ababa. One hundred (52.1%) nurses were implemented nursing process while 92(47.9%) of them were not implemented nursing process. From those implemented nursing process 61(61%) were female and 39(39%) were male. Forty one (44.6%) and 51(55.4%) female and male respectively were not implemented nursing process.

From the total respondents 104 (54.2%) of them said the dissatisfying aspect of their job was caring for so many patients. In a research conducted about nurse to physician communication, nursing workload definitely affects the time that a nurse can allot to various tasks. Under a heavy workload, nurses may not have sufficient time to perform tasks that can have a direct effect on patient safety. A heavy nursing workload can influence the care provider's decision to perform various procedures (31). It shows that when nurses become dissatisfied about their job the nursing care to be provided will not have systematic approach. In other words nursing process may not be implemented in a hospital with high patient flow beyond the capacity of nurses.

The average nurse-to-population ratio in high-income countries is almost eight times greater than in low-income countries. Low availability of nurses in many developing countries is exacerbated by geographical misdistribution; there are even fewer nurses available in rural and remote areas. Factors contributing to the nursing shortage vary in different parts of the world (14). As registered nurse-to-patient ratios decrease from 1:4 to 1:10, the number of post-op surgical patient deaths climbs dramatically (15). In this study seventy eight (40.6%) of nurses have cared

for more than 15 patients per day and 49(22.5%) were cared for 10-15 patients per day while 51(26.6%) have cared for 5-10 patients per day and only 11(5.7%) were cared for less than 8 patients per day. This shows that there is a significant difference between a research conducted in USA and this study due to the average nurse-to-population ratio in high-income countries is almost eight times greater than in low-income countries.

One hundred thirty four (69.8%) of respondents in this study have believed that staff turn over from a specific public health institution obligates the organization to provide a disorganized service. Sixty eight (35.4%) of respondents had believed that staff turnover can cause decrease in productivity where as 46(24%) had believed that staff turnover can cause decreased spread of organizational knowledge. Several studies have shown the relationship between nurses' working conditions, such as high workload, and job dissatisfaction (34). Job dissatisfaction of nurses can lead to low morale, absenteeism, turnover, and poor job performance, and potentially threaten patient care quality and organizational effectiveness (35). Thus, workload leads to staff turnover that could be a burdensome for implementation of nursing process.

In this study rude physician challenges and unsympathetic manager were causes of violence on nurses with equal number of respondents 54(28.1%) and dealing with abusive family member and everyone who did not do their job with equal number of respondents 49(25.5%). Thirty six (18.8%) and 26 (13.5%) were get strain or anxiety from harassing coworker and demanding patients respectively. A survey of 120 nurses in Brazil (59 percent response rate) in three units of pediatric hospitals to assess self-reports of violations in the medication administration process. Between 8 percent and 30 percent of the nurses reported violations in routine situations, and between 32 percent and 53 percent of the nurses reported violations in emergencies. The most frequent violations or work-around occurred in matching the medication to the medication

administration record and checking the patient's identification. The cause of nurses' abuse is different in this study the reason may be due to the set up of the research site.

Another important factor to be considered in the development of frameworks and instruments to assess good nursing care is the relationship between the quality of nursing care and the qualifications of the nursing staff providing care. However, some research undertaken in the United States and in the UK suggests that registered nurses provide a higher quality of nursing care than other categories of nurses and untrained health workers or assistants. Cutting health care costs by replacing qualified nurses with untrained health workers is an increasing temptation in many countries with a diminishing health budget. A critical dimension to quality, therefore, is economic (11). The qualitative part of this study tells us the caring capacity of nurses is affected by their experience and school. Nurses from private college and those worked for long time have lesser capacity to give care in a well organized manner.

According to the report released from Cambridge UK workload can be a factor contributing to errors. Errors have been classified as (1) slips and lapses or execution errors, and (2) mistakes or knowledge errors. High workload in the form of time pressure may reduce the attention devoted by a nurse to safety-critical tasks, thus creating conditions for errors and unsafe patient care (37). In this study forty eight (25%) of respondents were anxious from high patient flow. Among those 15(31.3%), 22(45.8%), and 11(22.9%) have committed knowledge, executive, and slip/slap error respectively. In turn high patient flow made nurses anxious and causes knowledge, executive, and slip/slap error while they are caring patients.

A retrospective cohort study in a neonatal intensive care unit revealed that the incidence of *E cloacae* infection in the unit was significantly higher when there was understaffing of nurses (24). A prospective study in a pediatric cardiac ICU found a significant relation between the

monthly nosocomial infection rate in the unit and the nursing hours per patient ratio. There were more nosocomial infections when the number of nursing hours per patient day was lower (25). Seventy eight (40.6%) of respondents were challenged to provide their nursing care due to early discharge before completing the planned intervention. Seventy five (39.1%) of respondents believed that patients discharged before completing their treatment and came back to their institution with a complicated problem which was difficult to manage. Sixty three (32.8%) of respondents got challenge from patients who were discharged before finishing their treatment due to patient's inability to collect the required material for care provision. The remaining 63(32.8%) were challenged due to poor participation of patients for the improvement of their illness. The result in other studies was somewhat different from the result of this study respondents because the cause of outcome was workload where as in this study was problems related to patients.

A study conducted in Europe to test the establishment of a validated model of nursing records aimed to promote individual care. The results showed limitations of the nursing process conducted according to the model, particularly in the identification of problems presented by the patients and, consequently, diagnosis and the possible intervention procedures. A study conducted in the United Kingdom to assess whether data obtained from nursing records could be reliably used to identify interventions for patients who had suffered acute myocardial infarction or a fracture of the head of the femur, showed that the analyzed nursing records did not provide an adequate picture of patients' needs for nursing interventions (47). Similarly in this study ninety two (47.9%) of respondents were able to identify the problem, etiology and sign and symptoms of a given actual nursing diagnosis. Only 39(20.3%) of respondents were able to write a full actual nursing diagnosis that have consisted of problem, etiology, and manifestations of the

problem. This tells us the inability of nurses to identify the components of nursing diagnoses and recording it in a well-organized manner that could be understandable by other staff members.

An investigation conducted in Brazil on the steps of nursing process actually implemented in the routine of a university hospital showed that all phases were performed. However, problems were identified in the nursing diagnosis process, involving recording the history and implementing nursing prescriptions. The evolution of expected results, in particular, was not adequately recorded (48). From 100(52.1%) respondents who have implemented nursing process 61, 22, 8, 7, and 2 were recorded their activities always, sometimes, every once in a while, rarely and never respectively. The part of nursing process which was not written is not separately identified in this study. But we can conclude that nurses could not fully document what they have performed cognizant of the fact that they have implemented nursing process.

One hundred forty (72.9%) of the total respondents were working in a stressful working environment where as 31(16.1%) were working in a disorganized working environment the remaining 21(10.9%) respondents explained their work place as it is negligent at a time. Stressful working environment make nurses activity full of error. Those worked in a disorganized working environment will have poor patient outcome, which can affect the socio economic status of the patient, and later on family and the society. As the in-depth interview respondents explained it, neglecting working environment was the principal factor that can influence implementation of nursing process among nurses who had worked for long period.

Eighty seven (45.3%) of the respondents were sometimes apply theories of nursing practice while 8(4.2%) were not at all practiced it. One hundred two (53.1%) have had very much ability to maintain patient's dignity, privacy and confidentiality (using nursing skills) where as only 3(1.6%) were not at all maintain it. Eighty five (44.3%) respondents have practiced the principles

of health and safety, including moving and handling, infection control; essential first and emergency first aid and emergency procedures very much where as 5(2.6%) not at all practiced it. One hundred eleven (57.8%) respondents were safely administer medicine and other therapies very much but 3(1.6%) were not at all administered. Seventy nine (41.1%) respondents have had the ability to consider emotional, physical, and personal care, including meeting the need for comfort, nutrition, personal hygiene and enabling the person to maintain the activities necessary for daily life; (using nursing skills, intervention/activities to provide optimum care). Eighty one (42.2%) respondents were able to respond to patient needs by planning, delivering and evaluating appropriate and individualized programs of care working in partnership with the patient, their care givers, family and other health workers.

As it is shown above most of the nurses were highly skillful related to the practice of nursing skills yet those of skills were not applicable on implementation nursing process.

This study shows us thirty one (16.1%) of respondents were highly skillful and 101(52.6%) were moderately knowledgeable while 60(31.2%) had poor knowledge. Eighty nine (46.4%) of respondents were highly skillful and 98(51%) were moderately skillful while 5(2.6%) had poor skill. The number of highly skillful nurses is twice of highly knowledgeable nurse and nearly equal number of nurses was moderately knowledgeable and skillful where as poorly skillful nurses were one fifth of poorly knowledgeable. Highly knowledgeable nurses were 27 times more likely and significantly associated with implementation of nursing process than low knowledge group nurses (COR: 27, 95%CI: (7.924-91.994), P: <0.001). Moderately knowledgeable nurses were positively and significantly associated with implementation of nursing process (COR: 4.417, 95%CI: (2.1-9.289), P: <0.001). Thus the numerical discrepancy

between level of knowledge and skill could be due to the nature of data collection tool. The tool used for knowledge assessment was structured questionnaire which could not be biased by respondents' internal interest whereas the skill assessment tool was Likert scaled questionnaire that could be biased by the interest of respondents to keep their dignity.

One hundred forty eight (77.1%) of participants were working for 8 hours per day. From those 55(37.2%), 38(25.7%), 43(29%), 12(8.1%) had provided care for more than 15, 10-15, 5-10, less than 8 patients per day respectively. It shows us the disproportional nurse to patient ratio. When there is lesser nurse to patient ratio nurses will be loaded with many disorganized and unstructured work. This could be a cause for stress and expose nurses to perform clinical error. In this study forty eight (25%) of respondents were anxious from high patient flow. Among those 15(31.3%), 22(45.8%), and 11(22.9%) have committed knowledge, executive, and slip/slap error respectively.

Despite their knowledge of the nursing process, certain factors limit the ability of nurses to implement it in their daily practice, including lack of time, high patient volume, and high patient turnover. The daily application of nursing process is characterized by the scientific background of the professionals involved since it requires knowledge and provides individualized human assistance. In this study also highly knowledgeable nurses were 27 times more likely and significantly associated with implementation of nursing process than low knowledge group nurses (COR: 27, 95%CI: (7.924-91.994), P: <0.001). Moderately knowledgeable nurses were positively and significantly associated with implementation of nursing process (COR: 4.417, 95%CI: (2.1-9.289), P: <0.001). It shows us knowledge is mandatory to implement nursing process.

High workload is a key job stressor of nurses in a variety of care settings, such as ICUs. A heavy nursing workload can lead to distress (e.g., cynicism, anger, and emotional exhaustion) and burnout. Nurses experiencing stress and burnout may not be able to perform efficiently and effectively because their physical and cognitive resources may be reduced; this suboptimal performance may affect patient care and its safety (36). In this study from the characteristics work place, nurses who were working in a stressful environment were 0.357 times significantly and less likely to implement nursing process than those worked in a disorganized environment (COR: 0.357, 95%CI (0.157-0.814), P: 0.014). Neglecting working environment had no significant association with implementation of nursing process. Hence nursing process implementation needs a safe and encouraging working environment.

## **CHAPTER SEVEN**

### **7. STRENGTH AND LIMITATION OF THE STUDY**

#### **7.1. Strength of the Study**

This study used qualitative method to supplement the quantitative result and also to explore factors that are not addressed by quantitative method.

This study is probably the first/ among the pioneers research related to nursing process in Ethiopia. It will be helpful as baseline information for other researchers.

#### **7.2. Limitation of the study**

The study design was cross sectional which is used to investigate findings on a single point of time. So that the factors affecting implementation of nursing process out of the study period could not be investigated. It is also limited to be compared with other studies due to absence of similar studies.

Sample Bias: because the study subjects were recruited from selected governmental hospitals of Addis Ababa. The study didn't included nurses working in other hospitals. Thus the study may not be generalized to all nurses in Addis Ababa because nurses out of selected hospitals may have different experience and opinion.

The quantitative questionnaire was prone to social desirability bias; because of every one do not want to expose once inability. The mismatch in the result of nurses' knowledge and skill was an evidence for this bias.

## **CHAPTER EIGHT**

### **8. CONCLUSION**

Different studies showed that nursing process is indispensable in the health care delivery system. Nurses should use nursing process to make their work visible and valuable to improve the quality of care for patients' prognosis. Nursing process implementation is affected by various factors, which causes poor quality of nursing care, disorganized caring system, conflicting role, medication error and readmission with similar problem, dissatisfaction with the care patients have received, and increased mortality.

High nurse to patient ratio is one factor that hinders implementation of nursing process; later causes increase workload. Increased workload again is a stressor for nurses.

Organizational factors took the greatest part for poor implementation of nursing process.

Lack of equipment supply in hospitals for giving nursing care was highly affecting implementation of nursing process.

Nurses were highly dissatisfied from organizational or patient factors.

Higher officials have no full awareness about nursing process that makes them not to facilitate the requirements for care plan implementation.

Patients were discharged early from hospitals due to poor understanding of modern medicine, poor economical status, long time required to get services, and incurable diseases. Early discharge of patients causes discharge before completing their treatment, decreased cooperation for their care, inability to afford the materials needed for care, and present with complicated problems.

Knowledge of nurses was one of the factors affected implementation of nursing process. Study participants have suggested the reason for poor implementation of nursing process might be curricular problem that do not consider the actual problem of the society.

As per the result of this study, most of the nurses were skillful but their skill is not applicable in practice for implementation of nursing process.

## **CHAPTER NINE**

### **9. RECOMMENDATION**

It is well known that nursing process implementation is very essential to maintain nursing as profession. The following measures should be taken to minimize the burdensome of factors affecting implementation of nursing process. The principal investigator would like to give the following recommendations

#### **A. Nurses Scholars**

1. Nurse researchers should focus to the challenges of the contemporary nursing in Ethiopia in comparison to the status of the international nursing.
2. Produce a standardized Ethiopian nursing practice.

#### **B. Health Facilities**

3. Health facilities must provide in-service education or periodical training to update the knowledge of nursing process.
4. Hospital officials should get the right information about nursing.
5. Hospitals should provide the appropriate supply of instruments for nursing care.

#### **C. Ministry of Health**

Ministry of health and its stakeholders are recommended to:

6. Change the training system to make nursing a well recognized profession by the society and professionals themselves.
7. Launch standardized qualification and accrediting method controlled by nurse scholars.
8. Check the status of nurses after they are graduated from training centers and take the right measure for the findings.

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# **Annex 1**

## **Information and Consent Sheet**

Information sheet and consent form prepared for BSc nurses who were participated in research project, a cross-sectional study assessment on implementation of nursing process among nurses for their inpatient in selected government hospitals of Addis Ababa

**Name of Principal investigator:** Mulugeta Aseratie

**Name of the organization:** Addis Ababa University, College of Health Sciences, Department of Nursing and Midwifery

**Name of the Sponsor:** Addis Ababa University

This information sheet and consent form is prepared to explain the study you are being asked to join. Please listen carefully and ask any questions about the study before you agree to join. You may ask questions at any time after joining the study. The investigator is final year MSN graduate student from the department of nursing, college of health science, Addis Ababa University, and one advisor from Addis Ababa University.

## **Purpose of Research Project**

Nursing process implementation could be highly influenced by different factors that can lead to Poor quality of nursing care, disorganization of the service, conflicting roles, medication error, poor diseases prognosis, readmission, dissatisfaction with the care provided, and increased mortality. These problems are manageable if a nurse can properly implement nursing process. This study will identify how the factors affecting implementation of nursing process performed by nurses apply its influence on the nursing practice in Black Lion Hospital (BLH), St. Paul Hospital (SPH), Ras Desta Damitew Memorial Hospital (RDDMH), and Yekatit 12 Hospital. The results of the study will be used as base line information to design appropriate intervention

strategies for the factors that can influence nurses' capacity to conduct nursing process for their patients.

### **Procedure**

To assess the factors affecting implementation of nursing process among nurses for their patient in Selected Government Hospitals of Addis Ababa you are invited to take part in this project. If you are willing to participate in this project, you need to understand and tick "yes" the agreement form. Then after, you will receive the questionnaire by the data collector to give your response. You do not need to write your name on the questionnaire and all your responses and the results obtained will be kept confidentially by using coding system whereby no one will have access to your response.

### **Risk/ Discomfort**

By participating in this research project, you may feel that it has some discomfort especially on wasting time about 30 minutes. We hope you will participate in the study for the sake of the benefit of the research result. There is no risk in participating in this research project.

### **Benefits**

If you participate in this research project, there may not be direct benefit to you but your participation is likely to help us in assessing implementation of nursing process among nurses for their inpatient. Ultimately, this will help us to identify the gap and take the appropriate intervention by the authorized stakeholder.

### **Incentives**

You will not be provided any incentives or payment to take part in this project.

**Confidentiality:**

The information collected from this research project will be kept confidential and information about you that will be collected by this study will be stored in a file, without your name, but a code number assigned to it. In addition, it will not be revealed to anyone except the principal investigator and will be kept locked with key.

**Right to refuse or withdraw:**

You have full right to refuse from participating in this research. You can choose not to respond to some or all questions if you do not want to give your response. You have also the full right to withdraw from this study at any time you wish, without losing any of your right.

**Persons to contact:**

If you have any question to ask, please contact

➤ Mulugeta Aseratie

**Tel: +251-910-03-3462**

**Email = [mulugetaaziz@yahoo.com](mailto:mulugetaaziz@yahoo.com)**

## **Annex 2**

### **Questionnaire**

**Addis Ababa University**  
**College of Health Science**  
**Department of Nursing and Midwifery**

#### **Consent Form**

This questionnaire is prepared to assess the factors affecting implementation of nursing process in Addis Ababa selected government hospitals.

The assessment is made for the partial fulfillment of Masters Degree in Nursing. The results of the study will be used as base line information to design appropriate intervention strategies to increase nurses' capacity to conduct nursing process for their patients.

The questionnaire contains both closed and open ended questions and will be provided in self administered form. You are therefore kindly requested to provide genuine answers to the questions.

The information you provide is confidential and is used only for the purpose of this study. If you have any question, don't hesitate to ask the data collector.

Your cooperation and participation until the completion of the questionnaire is very necessary for the successful completion of the assessment. We therefore ask your genuine willingness. However, you have the right to turn down if you are not voluntary to participate fill  'No'  in the box below.

If you are voluntary                      Yes          No    

Thank you in advance for your cooperation

Data collectors sign: \_\_\_\_\_

## Quantitative questions

### I. Socio-demographic data

1. Sex:                      A. female                      B. male
  
2. Age;  
  
    A. Below 24                      C. 45-54                      E. Above 65  
    B. 25-44                      D. 55-64
  
3. Marital status;  
  
    A. Single                      B. Married                      C. Widowed                      D. Divorced

### II. Organizational and nurses related questions

4. When do you graduated for BScN? \_\_\_\_\_ E.C.
  
5. How many years you did work in clinical area \_\_\_\_\_ which unit \_\_\_\_\_
  
6. How many hours do you work per day?  
  
    A. <8 hrs                      B. 8 hrs                      C. 12 hrs                      D. >12 hrs
  
7. For how many patients do you care per day?  
  
    A. Less than 5                      B. 5-10                      C. 10-15                      D. Greater than 16
  
8. Do you have all equipments to do your nursing care?  
  
    A. Yes                      B. No
  
9. Have you worked over time?  
  
    A. Yes                      B. No
  
10. If yes, is that with payment?  
  
    A. Yes                      B. No
  
11. Is the payment enough?



19. What do you use to make your work visible?

- A. Recording every activities perform
- B. Using nursing process
- C. Reporting to supervisors
- D. Working on the patient problem and seeing the outcome
- E. Nothing used

20. How often you document your work?

- A. Almost always
- B. Sometimes
- C. Every once in a while
- D. Rarely
- E. Never

21. Have you committed clinical error?

- A. Yes
- B. No

22. If you do, what kind of error you perform?

- A. Slip or slap
- B. Excusive error
- C. Knowledge error

23. How high rate of staff nurse turnover affect once society health \_\_\_\_\_

- A. Decreasing productivity
- B. Disorganized service delivery
- C. Lessoning spread of organizational knowledge

24. What do you think the causes of employee turnover?

- A. Job and employee skill mismatch
- B. Inferior facilities, tools, etc
- C. Less recognition
- D. Less or no appreciation for work done
- E. Less growth opportunities
- F. Poor training
- G. Poor supervision

25. What do you think the major reason of patient turnover?

- A. Poor understanding of the modern medicine
- B. Poor economical status
- C. Long time required to get the service

D. If they have incurable diseases

26. From the above question, how it influence your nursing care delivery?

A. Discharge before completing  
planed interventions

C. Inability to collect the required  
material for care

B. Not cooperative for the care you  
provide

D. Present with complicated  
problem which is difficult to  
manage

### III. Knowledge Assessment

27. One is not among the component of nursing process

A. Assessment

D. Evidenced based practice

B. Diagnosis

E. Implementation

C. Planning

F. Evaluation

28. A nurse should do one at the first step of nursing process

A. Collecting subjective and objective data

B. Directly intervening the problems of the patient

C. Evaluating what has be done for the patient

D. Indicating the activities to be done

29. The Gordon approach is directly targeted at

A. The main physiological disturbance

C. Abram Maslow's hierarchy of need

B. Human responses towards  
physiological disturbances

D. Ethical principles

30. Which nursing diagnosis is better to solve a patient's problem with diabetes mellitus chronic complication in the future

- A. Actual nursing diagnosis
- B. Potential nursing diagnosis
- C. Medical diagnosis
- D. Laboratory investigation of sugar level

31. What makes nursing process different from medical approach?

- A. Nursing diagnosis always focuses on the diseases than other human responses
- B. Nursing diagnosis always focuses on human responses than diseases process
- C. Both focuses on human responses but nursing process is limited to pathological problems
- D. Both have similar procedure to resolve a patients problem

32. Among the individuals in a hospital one is not mandatory for the better accomplishment of nursing process

- A. Nurses
- B. Patient
- C. Family
- D. Physician
- F. No one should be excluded

33. One is not included under the activities to be performed in the planning phase of nursing process

- A. Assigning priorities to the nursing diagnoses and collaborative problems
- B. Specifying expected outcomes
- C. Recording the data base of the patient
- D. Specifying the immediate, intermediate, and long-term goals of nursing action
- E. Identifying specific nursing interventions appropriate for attaining the outcomes
- F. Identifying interdependent interventions

34. In implementation step of nursing process a nurse is expected to perform

- A. Proposing the interventions for the patient's problem
- B. Implementing the proposed interventions in the planning phase.
- C. Performing the planned interventions excluding activity of daily living

D. Finishing the phase if the initial implementation could not bring any observable change on the patient's problem.

35. One could not be a guide for evaluation of nurses performance in nursing process

- A. The nursing diagnoses
- B. collaborative problems
- C. Priorities and nursing interventions
- D. expected outcomes
- E. All could be guidelines

36. Disturbed sleeping pattern related to unresolved fears and anxieties as evidenced by difficulty in falling /remain asleep. Identify the problem, etiology and sign/symptom of the above nursing

diagnosis. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

37. Write one full nursing diagnosis

\_\_\_\_\_  
\_\_\_\_\_

#### IV. Skill assessment

Score the following activities according to the frequency you perform

1/ Not at all 2/ Not really 3/ Undecided 4/ somewhat 5/ Very much

Practices	1	2	3	4	5
Ability to apply theories of nursing practice					
Ability to maintain patient dignity, privacy and confidentiality(using nursing skills)					
Ability to practice principles of health and safety, including moving and handling, infection control; essential first aid and emergency first aid and emergency procedures					
Ability to safely administer medicine and other therapies;(using nursing skills, interventions/activities to provide optimum care)					
Ability to consider emotional, physical, and personal care, including meeting the need for comfort, nutrition, personal hygiene and enabling the person to maintain the activities necessary for daily life; (using nursing skills, intervention/activities to provide optimum care)					
Respond to patient needs by planning, delivering and evaluating appropriate and individualized programs of care working in partnership with the patient, their care givers, family and other health workers.					

## **Qualitative Questions**

### **In-depth interview**

1. Mention the organizational factors affecting implementation of nursing process in your institution
2. How patients income affect implementation of nursing process in your institution
3. Which age group of nurses provides much care than others? Why?
4. Explain the impact of patient turn over and nurse turn over on implementation of nursing process? Which one highly affects it? Explain
5. What is the most challenging factor that can affect implantation of nursing process? explain