

UNIVERSITY OF CAPE COAST

KNOWLEDGE AND PRACTICE OF SKILLS FOR PHYSICAL  
ASSESSMENT OF PATIENTS BY NURSES IN THE GREATER ACCRA  
REGIONAL (RIDGE) HOSPITAL

BY

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and Allied Sciences, University of Cape Coast in partial fulfillment of the  
requirements for an award of Master of Nursing degree.

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## DECLARATION

### Candidate's Declaration

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Name: .....

Signature: ..... Date: .....

### Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Name: .....

Signature: ..... Date: .....

Co-Supervisor's Name: .....

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## ABSTRACT

Physical assessment is fundamental to the nursing process which forms an integral part of nursing practice and a standard of professional practice. This research aimed at determining level of knowledge and practice of physical assessment skills among nurses at the Greater Accra Regional (Ridge) Hospital. A descriptive cross-sectional survey was employed. A sample size of 262 nurses/midwives was used for the study. The study employed census as the sampling method. A self-administered structured questionnaire was used for data collection on level of knowledge, practice and barriers of physical assessment. Data was analysed using SPSS version 22. The findings revealed that nurses at Ridge Hospital have good knowledge on physical assessment, however their knowledge does not translate into practice. Physical assessment skills was good for observation, satisfactory for palpation and percussion but poor for auscultation. Lack of confidence, inadequate time and interruptions, specialty area, lack of resources, and lack of ward culture were perceived as barriers while reliance on others/technology, and lack of nursing role model were not perceived as barriers. There was an association between educational qualification and level of knowledge,  $p < 0.001$ . However, there was no significant difference between ranks and practices,  $[F = 1.655, P > .05]$ . Despite having high knowledge on physical assessment, practice was poor among the nurses. It was recommended that the Ministry of Health and the training institutions should emphasize on physical assessment in the curriculum. Ghana Health Service and health service institutions should organize in-service training for their staff to enhance their physical assessment practices for quality care.

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## **DEDICATION**

I dedicate this thesis to my loving husband and children.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **Background to the Study**

Physical assessment, coupled with history taking form the first step of the nursing process. Physical assessment is the objective data collection on a patient for planning care and intervention of health problems, (Cutler, 2002). Physical assessment is a nursing responsibility and requires the skills of inspection, palpation, percussion and auscultation and is usually done using the head-to-toe approach or the body systems approach (Munro & Campbell, 2000; Baid, 2006). Conducting physical assessment on a patient provides the nurse with database for making nursing diagnosis and planning care. The physical assessment may be done as an initial comprehensive assessment, an ongoing or partial assessment, a focused or problem-oriented assessment, or an emergency assessment (Weber & Kelley, 2003). Physical assessment is taught at various levels of nursing education to better prepare nurses to function in the health care delivery system. The fact that physical assessment is taught in nursing education provides proof that it is part of nursing roles and a unique one which is not merely practiced (Yamauchi, 2001), but required as a standard for professional practice (American Nurses Association, ANA, 2004).

The move by recognised bodies in the nursing profession to incorporate physical assessment skills into daily practice has become necessary due to the demands contemporary health care systems place on the profession. Existing literature provide evidence of benefits of incorporating physical assessment into everyday practice as bringing about the early

establishment of nurse-client relationship, enhances effective communication, enhances recognition of changes in patient's condition, promotion of nursing decision making and management, and increases job satisfaction (Lont, 1992; Yamauchi, 2001). The type of physical assessment skills deemed necessary for effective nursing practice may however differ by speciality area or the work setting.

It is evident that in some cases nurses may have the basic knowledge to perform physical assessment, but lack confidence to perform the skills of physical assessment due to the competency levels related to the various physical assessment skills (Shin, Kim & Kang, 2009). In the face of the constant changing health needs of society, it has become necessary that the nursing profession incorporates physical assessment as a component of nursing assessment to make nursing care effective in meeting the diverse health care needs of the population. Despite its importance, there is a growing concern about the gap between the physical assessment skills taught in nursing education and what is applied in clinical practice. This is because despite the range of physical assessment skills taught in nursing education, the practice has been limited by some nurses to observation of temperature, pulse, respiration, blood pressure, oxygen saturations, height, weight, urinalysis, mobility, skin color and integrity (West, 2006). Accurate physical assessment leads to appropriate planning and intervention, and ultimately better nursing outcomes, but nurses are however limited in various ways in applying their knowledge in practice. Nurses have also been recognized in playing pivotal roles in preventing accidents and emergencies that are directly related to nursing care such as falls, pressure areas, deep vein thrombosis, urinary tract

infections and pneumonia through performance of risk assessments on patients (Considine & Botti, 2004). Nurses are considered to be instrumental in achieving early medical input, intervention in adverse events and optimal patient outcomes through the practice of physical assessment (Duff et al, 2007). Therefore, inappropriate application of these physical assessment skills has implications on the quality of nursing care rendered to the patients.

There has been argument among researchers that the increase in clinical deterioration can be attributed to inadequate assessment by nurses (Douglas et al., 2014), while others share the view that what nurses are taught is outside the domain of the nursing profession, making it difficult for nurses to apply them in clinical practice. Some studies have reported that only a few of the physical assessment skills learned in nursing education are used by nurses in clinical practice as others apply the physical assessment skills in performing a comprehensive assessment on patients (Giddens, 2007; Giddens & Eddy, 2009; Yamauchi, 2001). Other studies have also reported that nurses use only those physical assessment skills that are relevant to their area of practice (Douglas et al, 2014). Some studies have indicated some factors influencing nurses' use of physical assessment skills as well as barriers to nurses' use of physical assessment skills. Most of the findings from the studies conducted on nurses' physical assessment practices were similar, though the settings differ.

While it is evident there is literature on what pertains to the practice of physical assessment skills in Australia, Canada, New Zealand, Japan, United States of America and United Kingdom among others (West, 2006; Shinokazi & Yamauchi, 2007; Lexa & Dixon, 2007), there is limited published research

on the use of physical assessment skills among registered nurses in Ghana. This raises questions about the level of nurses' knowledge in physical assessment, how nurses practice physical assessment skills, factors influencing the nurses' use of physical assessment skills and barriers to the practice of physical assessment skills as well as the implication on nursing practice in our local setting. This limited knowledge has prompted a research to conduct an assessment of nurses' knowledge and practice of physical assessment skills among nurses specifically in the Greater Accra Regional Hospital.

### **Statement of the Problem**

It is documented that accurate physical assessment can aid nurses to make accurate nursing diagnosis, plan intervention and improve patients' outcome while inadequate assessment put patients at risk of clinical deterioration (Weber & Kelly, 2003). A good knowledge of physical assessment and making it a routine will bring about better outcomes of patients' conditions and satisfaction to nurses. Studies done on the issue in Canada, New Zealand, United States of America, Japan among others indicate that nurses have good knowledge of physical assessment and have successfully incorporated it into their daily practice (Yamauchi, 2001; West, 2006; Lexa & Dixon, 2007; Douglas et al, 2014). As a contributory factor in the effective utilisation of the nursing process, physical assessment is a standard for professional practice (ANA, 2004). Despite being a part of the nursing process, the issue has not been adequately dealt with by the nursing profession in Ghana as has been done in the western countries. This has prompted this research to understand the reality of physical assessment practices among nurses at the Greater Accra Regional Hospital.

### **Objectives of the Study**

**General objective:** The primary objective of this study is to investigate the knowledge and practice of physical assessment among nurses at the Greater Accra Regional Hospital.

**Specific objectives:** The specific objectives of this study include:

1. To identify level of nurses' knowledge on physical assessment.
2. To identify physical assessment practices among nurses in the clinical setting.
3. To identify barriers to physical assessment practice among nurses.

### **Research Questions**

The study was guided by the following research questions:

1. What is the level of nurses' knowledge of physical assessment?
2. What is the frequency of physical assessment practice among nurses in the clinical setting?
3. What are the barriers to physical assessment practices among the study nurses?

### **Significance of the Study**

The study may help to appreciate the reality of the use of physical assessment skills among nurses in clinical practice.

It may help to understand whether or not there is a gap between knowledge and practice, thereby encouraging nurses to improve on the utilisation of physical assessment to sustain the use of the nursing process.

The study will also serve as literature in the local context (Ghana) for future research to build on knowledge related to the issue of physical assessment.

Finally, findings from the study may aid amendment of institutional policy on standards for nursing practice to improve the quality of care that is rendered to the patients who access health services at the hospital.

### **Delimitation of the Study**

The focus of this study is on the knowledge and practice of physical assessment among nurses. However, since the study focuses on the Greater Accra Regional (Ridge) Hospital, the findings of the study cannot be generalised accurately to other hospitals and clinics in the country.

### **Limitation of the Study**

Limitations are the challenges that are inherent in this study. These difficulties included challenges in accessing data of the hospital's internal operations, non-availability of some latest data and the withholding of some information to retain the confidentiality of the organisation. Another limitation was that the questionnaire did not cover the full range of physical assessment procedures.

### **Operational Definitions**

Physical assessment: objective patient data collection using the skills of inspection, palpation, percussion and auscultation (Cutler, 2002).

Nursing practice: professionally accepted daily activities of nursing (Considine, 2005).

Knowledge: the information, skills and understanding that you have gained through a learning experience (Baid, 2006).



## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **Introduction**

This chapter discusses the literature review pertaining to the topic under-study. The literature review has been done using CINAHL, MEDLINE and EBSCO. Themes reviewed centred on nurses' level of knowledge on physical assessment, frequency of physical assessment practice, factors that influence the practice of physical assessment skills among nurses and barriers to the practice of physical assessment skills among nurses as well as implications on nursing practice.

#### **Nurses' Knowledge of Physical Assessment**

Physical assessment is taught as a component of the nursing process at the diploma, undergraduate and post graduate levels of nursing education because it forms part of the assessment as the first phase of the nursing process. Knowledge of nurses on physical assessment involves techniques of inspection, palpation, percussion and auscultation (Munro & Campbell, 2000). However, there is limited nursing literature on the specific content, depth of content and the skills that are taught and there are variations with regards to the kind of nursing program being run. It may be accepted that if there are variations in contents of physical assessment taught in the various nursing programs, then there will be variations also in the level of knowledge depending on which program one enrolled in. This may also be reflected in the physical assessment practices of the individual nurses. Some nurses may also have a good knowledge in physical assessment skills but may not practice

these skills in clinical setting due to the various barriers that exist in terms of speciality or setting.

The available literature showed that physical assessment skills are taught in nursing education which also suggests that nurses acquire some level of knowledge on physical assessment skills during their years of nursing education. There are studies that confirm this. For instance, in a survey involving one hundred and ninety-eight (198) faculty teaching in undergraduate nursing programs, it was reported that eighty-one percent (81%) of the 122 physical assessment skills listed in the survey were taught and twenty-five (25%) of these skills were used regularly by nurses regardless of the educational preparation (Giddens & Eddy, 2009). This could explain the effect of ward culture as a strong factor in the practice of physical assessment. Data for this study was however collected from only the perspective of faculty teaching courses on physical assessment. There are findings from some studies suggesting that too much contents are taught in nursing education while only a few of these physical assessment skills are utilised in clinical practice (Giddens, 2007). This revelation should send a signal to stakeholders to consider developing curricula that prepares the products of nursing education to function effectively in clinical practice.

A survey involving one hundred and ninety-three (193) participants showed that thirty (30) out of one hundred and twenty-four (124) physical assessment skills were routinely performed across practice settings while the remaining skills were done occasionally or not at all (Giddens, 2007). It seems that faculty members may be using teaching materials with in-depth content but may teach only those skills considered relevant to the course without

considering what may be needed for future practice in the clinical setting. Another report from a survey conducted by this same researcher with faculty as participants using one hundred and twenty-two (122) physical assessment skills developed from texts books used for teaching physical assessment in pre-registration and undergraduate nursing programs indicated that sixteen (16) out of the eighteen (18) categories of physical assessment skills were taught in fifty percent (50%) of nursing programs. This seems to buttress the assertion that faculty may be teaching only a portion of the contents slated for a particular nursing program without taking into account their relevance in the clinical area.

Some studies however, indicated that there is a statistically significant difference in curricular approach as well as academic credits but no significant difference was found between laboratory teaching approach and number of laboratory credits (Secrest et al, 2005). It can be argued that educational settings that use laboratory teaching approach are likely to produce nurses with a good level of knowledge to perform physical assessment in the clinical setting than those that did not use the laboratory teaching approach. This portrays a clear discrepancy existing within the educational curricula in nursing. It was also reported from the survey that faculty taught ninety-two percent (92%) of one hundred and twenty (120) skills listed in the survey, but only twenty-nine percent (29%) were used on daily to weekly basis while thirty-seven percent (37%) were not used at all (Secrest et al, 2005). A limitation identified from the study was the small sample size was used. Most of the responses given may however not suggest a true reflection of what the respondents actually practice.

Yamauchi (2001) also reported findings from a survey using twenty-eight (28) physical assessment items that, over ninety percent (90%) of the respondents indicated having knowledge in twenty-three (23) of the twenty-eight items but used only four of these physical assessment skills in clinical practice. This finding again confirms that most of the physical assessment skills are not used by nurses though they may have a good level of knowledge of many of them. This leads to the question of what may be preventing nurses from performing a comprehensive physical assessment on their patient though they have a good level of knowledge of the procedure.

There may be some core physical assessment skills used across all settings while some settings may require specific skills. This does not dispute the fact that some skills are not used even in areas where there may be relevance to these physical assessment skills. For instance, observation of vital signs; temperature, pulse rate, respiration rate and blood pressure, and sometimes oxygen saturation rates may cut across many areas of practice. However, this does not limit chest auscultation to only respiratory units. A survey report by Giddens (2007) revealed that thirty (30) of the core skills used in daily practice were those assessment skills mainly classified under inspection and general observation with the majority associated with respiratory and cardiovascular assessment. While some nurses working in the respiratory units utilised the skills of chest auscultation in their daily practice, other nurses did not perform chest auscultation even in the respiratory unit where it is relevant (Wheeldon, 2005). This further explains why some nurses may be required to use certain physical assessment skills relevant to their area of practice, but fail to do so due to some reasons. Similarly, West (2006)

reported that assessment has been limited to observation of temperature, pulse, respiration, blood pressure, and oxygen saturations via pulse oximeter by most nurses across clinical settings to the detriment of the patients. This assertion may be true for some areas of general practice but some nurses actually go beyond using these basic skills of physical assessment.

In another survey involving one hundred and fifty (150) participants, Lont, (1992) reported that the majority of the participants had indicated that they have been taught to listen to chest sounds via auscultation with a stethoscope but few of the participants indicated that they performed the skill on a daily basis. In the researcher's opinion, what could have accounted for the differences in practice among the nurses are lack of confidence in using their physical assessment skills and inability to identify abnormalities in patients that require chest auscultation as part of their care. Similar findings from another study indicated that 126 physical assessment skills were taught at undergraduate nursing programs but only 5 of the core skills were performed by the nurses which were mainly inspection and general observation of the patient whiles over 70% of the skills were never performed (Douglas et al, 2014). This information gathered from the literature suggest that nurses may have been equipped with adequate knowledge of physical assessment skills in the course of their nursing education to enable them perform physical assessment in clinical practice, but there are variations in the level of knowledge, confidence and competency in performing physical assessment on patients. The literature seems to be limited to nursing education in the western countries, but limited studies on Africa and specifically Ghana, making it

almost impossible to make a clear comparison among the various settings used for the studies.

Regarding the use of the four basic techniques of physical assessment, most studies have reported that items that were indicated as frequently performed were those listed under inspection or observation with few of the items listed under palpation and auscultation. For instance, in a survey involving one hundred and thirty-four clinical nurses and fifty nurse educators it was reported that ninety-seven percent (97%) consensus rate was obtained for items listed under inspection/observation. This is because nurses considered those items essential in the daily traditional activities of caring for patients (Shinokazi & Yamauchi, 2007). Other studies also found that physical assessment skills taught to nursing students did not differ by the type of nursing program offered (Giddens & Eddy, 2009). It can be inferred from the literature that nurses are taught physical assessment in nursing education irrespective of the type of program except that those studies did not report on the contents and depth of contents taught in the various nursing programs. This is one aspect of the issue that may require further investigation to understand the disconnection between physical assessment taught in nursing education and that which is applied in clinical practice. Another survey report indicated that ninety percent (90%) of the participants involved in the survey assessed items that required inspection or observation which were mainly body temperature, respiration rates, pulse and blood pressure (Yamauchi, 2001). In that same study, it was discovered that three of the respondents indicated they do not know how to assess vital signs although it was reported as the assessment skills widely performed by nurses across many practice

settings. Other studies have reported also that apart from performing the traditional observation of respiration rate, pulse, temperature and blood pressure, there is a fifth vital sign which is oxygen saturation assessed by pulse oximetry (Considine & Botti, 2004).

### **Nurses' Knowledge on Physical Assessment by Gender**

Nurses' knowledge of physical assessment skills and gender can have significant difference in relation to frequency of skill utilisation. In most of the studies reported, females dominated as participants, which is obviously due to the fact that the profession is dominated by females in most settings. In a survey conducted on physical assessment involving three hundred and forty-two females and seven males as participants, it was reported that no significant difference existed in level of knowledge and frequency of use of physical assessment skills between male and female nurses (Yamuachi, 2001). A similar finding was reported by Scobie (2005) from a survey involving thirty-three (33) respondents that there was only one male respondent but there was no significant variation in the responses based on gender. Douglas et al. (2014) also reported that there was no significant association between knowledge and gender in a study involving 40 male and 393 female participants. The findings are consistent with the general trends of females predominantly forming the nursing population in our local context. This finding does not necessarily mean that gender may not influence the use of physical assessment skills either as students or qualified nurses. There may be different findings in cultural settings where only male nurses are allowed to perform physical assessment on male patients due to gender sensitiveness of the population being served or in settings where males dominate in the profession.

### **Nurses' Knowledge of Physical Assessment by Years of Experience**

There may be correlation between nurses' knowledge of physical assessment skills and years of experience because it is expected that nurses gain more knowledge and competency with utilisation of skills after practicing for years in the clinical setting. For instance, in Ghana, three years working experience is considered the minimum years to qualify for promotion from one rank to the next higher rank in the nursing hierarchy. This presupposes that a newly qualified nurse/ midwife would have gained the basic experience required for promotion after working for three years. A study conducted to determine nurses' level of knowledge revealed that participants' years of clinical experience was evenly distributed between one and more than twenty-five years with almost fifty percent (50%) of respondents having ten or fewer years of clinical experience. However, the survey finding indicated that there was no significant correlation between nurses' knowledge and years of clinical experience (Scobie, 2005). This implies that nurses who have practiced for years did not show a higher level of knowledge of physical assessment despite the years they have spent in clinical practice. On the other hand, another survey reported that nurses with few years of experience were more eager to learn chest auscultation contrary to nurses with more working experience who expressed less interest in learning chest auscultation (Lont, 1992). The study however did not give an explanation to what might have accounted for the difference in interest for chest auscultation between participants with more years of clinical experience than those with less years of experience. Some studies on physical assessment skills also showed that there was no statistically significant association between knowledge and years of



experience. For instance, there were similar responses from respondents irrespective of differences in years of clinical experience as well as educational qualifications (Douglas et al, 2014).

In contrast, one study reported that there was statistically significant difference between level of knowledge and years of work experience as nurses with more clinical experience had more knowledge of physical assessment skills while nurses with less years of practice had less knowledge of physical assessment skills (Yamauchi, 2001). In that survey, 63.3% of the participants were reported to have very good knowledge of physical assessment skills and could teach others how to assess vital signs. Also, 30% of the participants indicated they could teach seven more of the physical assessment skills. The researcher concluded from that study that Japanese nurses learned physical assessment skills on the job. This may be true because, from experience nurses/midwives who have worked with different teams of medical professions often demonstrate some practical skills they have gained through long years of work experience. This may not dispute the fact that, educational or professional qualifications has influence on physical assessment practices among nurses because it is expected that Advanced Practice Nurses (APNs) would be competent in performing physical assessment than undergraduate nurses and pre-registration nurses. Also, it is expected that longer years of experience will make the nurse with longer years of clinical practice to be more confident and competent than the nurse with less years of work experience.

## **Nurses' Use of Physical Assessment Skills in Clinical Practice**

Most of the physical assessment skills taught in nursing education are utilised frequently in clinical practice while others are not used at all. These studies further suggest that physical assessment skills are used on daily to weekly, monthly basis or occasionally (Yamauchi, 2001). One study reported that of the one hundred and twenty (120) physical assessment skills taught in nursing programs, only a subset of these skills were routinely used by nurses in clinical practice (Giddens & Eddy, 2009). Based on these findings, one would assume that nurses are taught physical assessment skills that would be useful to their practice but in reality, what may be considered useful to nurses in clinical setting are not utilised by them. Similar findings were reported from a study involving one thousand, two hundred and twenty (1220) nurses using 121-item survey of physical assessment skills, (Birks et al, 2013) The study revealed that only three hundred and forty-five (345) of the participants routinely used these physical assessment skills in practice, thirty-one percent (31%) were rarely used, while thirty-five point five percent (35.5%) were not used at all though they were learned in the course of their nursing education. This finding may be indicative of how relevant these physical assessment skills are to the individual nurse irrespective of the depth or content of assessment skills learnt during the educational years. Giddens (2006) also confirmed that there are no significant differences in educational qualifications and frequency of use of physical assessment. The study only mentioned registered nurses without specifying categories in terms of area of practice. Also, there is a restriction on the generalisation of the findings because the study was done in a single institution.

Findings from another study involving one hundred and twenty-three (123) advanced practice nurses (APNs) and nurse practitioners (NPs) sampled from five major hospitals in Seoul indicated that fourteen (14) out of the one hundred and twenty-six (126) items listed were used regularly by the participants. Most of these skills were limited to general observations whiles forty-six (46) of the skills were rarely used. This indicates that the remaining sixty-six (66) skills in the list were not used at all. It can be inferred from the study that the two groups of participants have gone through educational programs that should enable them to perform physical assessment, but the fact that they are not utilising these skills gives room for investigation. Another study involving three hundred and forty-nine (349) Japanese nurses indicated that over eighty percent (80%) of the participants assessed vital signs on a daily basis (Shinokazi & Yamauchi, 2009). This buttresses the assertion that nurses are used to the traditional form of assessment by observing respiration rates, pulse, temperature, blood pressure and oxygen saturation via pulse oximetry, (Considine & Botti, 2004). Similarly, a study involving thirty-three registered nurses to identify nurses' knowledge and frequency of use of physical assessment skills, revealed that seventy-nine percent (79%) of the respondents had undertaken a physical assessment course, but limited skill utilization to assessment of vital signs, peripheral pulses, gait and coordination (Schroyen et al., 2005).

Giddens (2007) asserted that only ten (10) core skills were consistently used to assess respiratory and cardiac systems, while skills for assessing the eyes, ears, nose and throat were rarely used. This also points to the fact that nurses did not find assessment of these organs relevant to the plan of care to

the patients' health problems. Many of the studies have reported that inspection was the widely used skill across practice while auscultation was used by nurses who have been taught to listen to the chest and those working in respiratory units. Inspection / observation is the most used technique of physical assessment. Respiratory rates and oxygen saturation were assessed frequently because nurses considered them essential in respiratory assessment (Shinokazi & Yamauchi, 2009). This could explain the fact that nurses are more comfortable performing assessments that require the technique of inspection/observation than the other techniques of physical assessment. West (2006) also reported that nurses assessed respiratory rate frequently because they found it useful in determining deterioration of patients. This attests to the fact that, the relevance of a particular assessment skill to the nurse in an area of practice will determine its utilization. A pilot study conducted in New Zealand using thirty-eight physical assessment items to determine use of physical assessment skills among nurses before and after a physical assessment course revealed that there was a significant increase in the use of physical assessment skills after the course, with twenty-five percent (25%) palpating the thorax, twenty-nine percent (29%) palpating neck nodes, twenty-six percent (26%) palpating the abdomen, twenty-eight percent (28%) palpating the jugular veins, thirty-nine percent (39%) auscultating heart murmurs, fifty-three percent (53%) auscultating lung sounds, thirty-nine percent (39%) percussing the abdomen and forty-seven percent (47%) percussing the chest (Neville et al, 2006). It was reported also that eight of the assessment skills required the use of palpation, auscultation and percussion. These findings may be the reason for the need of confidence and competency

for performing any particular core assessment skill, giving credence to the assertion that, until nurses are confident with their physical assessment skills, more advanced levels of nursing focused assessment will be unsuccessful, (Lillibridge & Wilson, 1999). Another study reported high percentages of use of physical assessment skills among participants for the study (Sony, 1992). For instance, auscultation of abdomen scored ninety-four percent (94%), palpation of abdomen was ninety percent (90%), auscultation of thorax was eighty-eight percent (88%), palpation of peripheral pulses was ninety-three percent (93%), auscultation of mitral areas was eighty-four percent (84%) and inspection of neck was eighty-two percent (82%). The study further indicated that only ten out of the forty-two physical assessment items listed for the study was used by nurses while twelve of the skills were not used at all (Sony, 1992). This is in contrast to the findings by Schroyen et al. (2005) which reported that nurses performed assessment that did not require the use of palpation, percussion and auscultation. The reason for the difference could be attributed to confidence and competence levels of the respondents in the study as well as organizational protocols.

Physical assessment skills such as palpation and percussion were reported as rarely used by participants in most of the studies reviewed in literature. This probably could be due to the fact that respondents in the studies did not indicate if they used palpation and percussion in their practice. However, Shinokazi & Yamauchi (2009) reported that nurses indicated barely using percussion because they relied on auscultation and diagnostic tests for similar result for percussion. Holloway (1999) also reported that respondents in the survey indicated that assessment techniques such as palpation,

auscultation and percussion were barely utilised when performing physical assessment. One limitation of most of these studies is the use of researcher-developed instruments which were not replicated in other studies to confirm their reliability and validity.

### **Years of Experience and the Use of Physical Assessment Skills among Nurses**

It would be logical that more years of experience will amount to frequent use of the physical assessment skills, but this may be true for some of the settings where studies have been conducted. For instance, a study involving one hundred and sixty-eight nurses and midwives showed that having longer clinical experience did not reflect a higher ability in performing physical assessment skills nor frequent use of these assessment skills (Akao et al, 2013). On the contrary, one survey reported that Japanese nurses with a longer years of clinical experience practiced many of the physical assessment skills daily and without difficulty while nurses with few years of clinical experience performed a few of the physical assessment skills and with difficulty (Yamauchi, 2001). The study specifically indicated that nurses who had more years of clinical experience could assess the external ear, extra ocular movement, pupil response, examination of the nose and oral cavity. Participants could also palpate the neck and axillary lymph nodes, jugular venous pressure, percussion of the thorax and abdomen as well as auscultation of breath sounds, bowel sounds and examination of breast lumps. It can be deduced from this study that ability to perform physical assessment skills requires some clinical years of experience. Therefore, as nurses/midwives practice for some years it is expected that they would gain additional practical

knowledge to what has been learnt during the educational period. The researcher concluded from this study that Japanese nurses learnt physical assessment on the job (Yamauchi, 2001).

### **Educational Qualification and the Use of Physical Assessment Skills among Nurses**

It has been established from the literature that physical assessment skills are taught at all levels of nursing education, but variations exist in the number of skills taught in the various nursing education programs even in the same country. Yamauchi, (2001) concluded from his survey that there was no statistically significant difference in terms of physical assessment skills utilisation between the two groups of participants used for the study though there they had different nursing educational programs. Though there was only one baccalaureate degree nurse among the participant, the responses of that baccalaureate degree nurse were no different from the responses of the others in terms of perceived need for physical assessment skills. Scobie (2005) reported similar findings from a survey involving nurses with a bachelor's degree and those with post graduate qualifications which indicated that there was no significant correlation between attainment of degree and frequency of use of physical assessment skills. The assertion that there are no significant variations in the content of physical assessment taught across various levels of nursing education (Giddens & Eddy, 2009) may be a reflection of the trend of physical assessment practice observed in many settings of practice. Based on these findings, the argument for not restricting physical assessment to only advanced practice nurses and nurse practitioners but to all registered nurses should be strengthened.

## **The Specialty Area and the Use of Physical Assessment Skills among Nurses**

It is arguable that the range of physical assessment skills used by nurses may be influenced by their area of practice or the unit in which one works. While it may be required that a comprehensive assessment of a patient should be done nurses may consider those assessment skills that are traditionally relevant to the patient's situation or those that are part of the ward culture. Considine and Botti (2004) asserted that nurses working in Accident and Emergency units often perform a physiological assessment of patients as routine or in response to patients' condition. Those assessments mostly comprise of measurement and documentation of respiratory rates, pulse, blood pressure, oxygen saturation using pulse oximetry, and neurological assessment using the Glasgow Coma Score. Other studies have shown that certain assessment skills are performed by nurses in some units as a ward culture, but not all nurses perform these assessment skills even where it is a routine of the ward. For instance, 73% of 150 nurses used in a survey habitually performed auscultation of the thorax (Lont, 1992). It can be inferred from that study that the remaining 27% of the nurses were not auscultating the thorax even if it was required. Another study also reported that 84% of 148 nurses working in the respiratory units performed auscultation of the mitral area as part of regular practice (Sony, 1992). This again shows that 16% of nurses working in that same unit were not auscultating the mitral area, though it was meant to be part of the ward culture in that unit. It is obvious from these studies that not all nurses working in the respiratory unit were performing auscultation of the thorax though it is relevant in respiratory assessment with regards to the unit



in question. This study relied on self-reported data from a nursing perspective without considering evaluation of individual competence of the nurses. It was asserted that nurses are demonstrating unwillingness to incorporate respiratory assessment into their clinical practice and also because nurses working in general wards often lack skills to perform physical assessment (Considine and Botti, 2004), though it is an important aspect of assessment that enhances early detection in patient changes and facilitate prompt intervention with enhanced patient outcomes (Cutler, 2002). It is prudent that all areas of practice in the field of nursing employ physical assessment in daily practice, but much will depend on what nurses in a particular area of practice consider relevant to their specialty area in order to ensure compliance by nurses. For instance, nurses in specialty area such as ENT, ophthalmology, critical care among others will be inclined to focus assessment on the body part relevant to their specialty other than considering a head- to- toe assessment. The findings from a study performed by a group of researchers bring to bear that nurses who do not work directly on patients realise the need for nurses to use physical assessment in daily practice (Anderson et al, 2001). In a study involving one hundred and fifty case managers and thirty- nine nurse administrators, participants indicated the need for upgrading physical assessment skills relating to the lungs, thorax, cardiovascular system and abdomen. In that study the case managers indicated the need for skills upgrading as a continuing education priority (Anderson et al., 2001). It can be inferred from the literature that nurses would comply with utilisation of physical assessment skills based on their ward culture or what they consider relevant to patient situation. It is relevant to note that some physical assessment skills utilisation will take

precedence over others as many studies have cited one of the barriers to physical assessment practice as some of the physical assessment items not appropriate to their area of practice.

### **Factors Influencing Physical Assessment Practices among Nurses**

Many physical assessment skills are learnt by nurses during their nursing education as indicated in literature but only a small number of nurses are able to use some of these skills while others do not utilise any of the skills learned. Although nursing education realise the need for physical assessment hence have been taught as part of the nursing process in all levels of nursing education, literature suggest that while some nurses use these assessment skills in clinical practice, the frequency of use differ among settings and even among nurses in the same setting (Douglas et al, 2014). Nursing assessment of patients has been described as routine or reactive where the routine one is performed at intervals depending on the patients' care plan or the organizational protocols. The reactive physiological assessment is done when the patients' condition changes and serves to provide the nurse with data to relay to other health professionals (Considine & Botti, 2004). This clearly suggests that, despite physiological assessment being the traditional role of nurses, patients' conditions and organizational protocols play pivotal roles in effecting their utilization. The studies mentioned in literature give credence that some nurses do not apply these assessment skills at all in everyday practice even where they are required. Though inconclusive, it may be noted that those nurses who utilise some of these physical assessment skills might have been influenced by certain factors some of which have been reported from survey findings. Nurses who use physical assessment skills in clinical

practice have attributed utilisation of these physical assessment skills to a number of factors some of which cut across a wide practice area while others may be specific to particular area of practice. For instance, Douglas et al (2014) reported on a study that nurses' physical assessment practices were influenced by specialty area, absence of general practitioners/doctors and clinical setting. This implies that, for some nurses, physical assessment is part of the routine activities in their setting though they may not necessarily perform all the physical assessment skills other than those deemed appropriate to their area of practice. For some nurses also the absence of physicians or general practitioners places them in a position to perform physical assessment to obtain baseline data for clinical judgment and appropriate decision making that will prevent complication or yield better patient outcomes.

Similar findings were reported also by Scobie (2005) suggesting that specialty area influenced nurses to practice those physical assessment skills relevant to their area of practice or when a problem was suspected. For example, the ophthalmic nurse would restrict physical assessment of a patient to the eyes without having to bother about other parts of the body unless it is suspected that the presenting complaint is related to other parts or systems of the body. This however should not be a ground for neglecting assessment of the other body parts because all nurses learn general assessment before specialization in a field of interest. The study indicated also that nurses in rural areas with limited general practitioners as well as community- based nurses were compelled to utilise physical assessment skills due to their roles and positions in those settings. That study further reported that there was no correlation between attainment of a degree and frequency of skill use by

nurses, but did not report on any association between nurses' age and frequency of physical assessment practice, years of clinical experience and frequency in the use of physical assessment skills. This finding indicates that years of clinical experience had some influence on nurses' ability to perform physical assessment skills. In all the findings reported in this study, it is suggestive that availability of resources in terms of physical assessment equipment, and administrative support were not cited as factors that influenced nurses' physical assessment practices though few studies cited these two factors as barriers to physical assessment practice. Rather support from colleagues and other health professionals, and nursing role models were cited as some factors that influenced nurses' frequent use of physical assessment skills (Douglas et al, 2014). Another study reported that continuing education on physical assessment skills was perceived as a need to build nurses' confidence and skills in physical assessment (Anderson et al, 2001). Though the literature cited lack of role nursing models as one of the barriers to the use of physical assessment, it did not state that senior nurses were the ones guilty of task. However, it is traditionally accepted that senior nurses serve as role models to their junior colleagues who are still in the process of learning new experiences on the job, but no literature has cited whether or not there is any correlation between ranks and level of knowledge and frequency of practice. The researcher has interest in determining whether there is any association between these variables.

Nurses traditionally run shift systems in order to provide a twenty-four- hour care to hospitalised patients and also cater for accidents and emergencies. However, all the studies done on physical assessment did not

consider investigating if there is any particular shift system that has a great influence on the practice of physical assessment. It can be inferred from the earlier information that nurses do routine or reactive physiological assessment that the task of performing assessment is not restricted to a particular shift. This implies that all nurses are obliged to perform assessment on their patients irrespective of the shifts, because assessment is key in detecting changes in patients' condition and acting promptly either by the nurse or an appropriate authority. Nurses have been recognized as the main health professional to be spending more time at the patients' side, hence the mostly the first to notice changes or deterioration in patients' condition and act directly or decide the most qualified health professional to act on the situation (Considine & Botti, 2004).

### **Barriers to Physical Assessment Practice among Nurses**

Nurses have given many reasons for not being able to implement physical assessment skills fully or effectively as reported in some studies. For instance, Scobie (2005) reported some of the barriers as perceiving physical assessment as a non-nursing responsibility, lack of time, unavailability of equipment for physical assessment, lack of support from colleagues, inappropriate to the clinical setting and no opportunity to use physical assessment skills. Though the sample size was small, the findings did not differ much from what have been reported from other studies (Skillen et al, 2001; Duff et al, 2007). It is obvious that some of the barriers may cut across many settings of practice where researches have been carried out there may be barriers peculiar to specific settings. One other study by Douglas et al (2014) to develop and psychometrically test the barriers to nurses' use of physical

assessment scale reported the barriers to the use of physical assessment skills in seven subscales as; reliance on others and technology, lack of time and interruptions, ward culture, lack of confidence, lack of nursing role models, lack of influence on patient care and specialty area. The means for the seven subscales were reported as reliance on others and technology (2.21), lack of time and interruption (2.69), ward culture (2.26), lack of confidence (2.45), lack of nursing role models (2.63), lack of influence on patient care (2.06) and specialty area (3.48). That study did not cite lack or inadequate knowledge and lack of physical assessment equipment as barriers though they are also considered as perceived barriers to nurses' use of physical assessment skills. There was no significant correlation between nurses' perceived barriers to use of physical assessment skills and age, gender, and level of education. However, having more than 10 years of clinical experience was associated with a lower perception of lack of time and interruptions, and lack of confidence. On the contrary, less than 5 years of clinical experience was associated with lack of nursing role models as a barrier.

Few other studies have mentioned some factors considered as barriers to nurses' physical assessment practice. One such study was by Skillen et al (2001) which reported lack of confidence, fear of making mistakes and absence of peers in the work environment to collaborate findings as barriers in addition to those already reported from other studies as barriers to nurses' use of physical assessment skills in clinical practice. Shin et al (2009) also reported findings from a study involving one hundred and twenty-three (123) participants that lack of confidence in the use of some assessment equipment was indicated by majority of participants as a barrier to the use of physical

assessment skills. This was confirmed in a survey to determine nurses' use of physical assessment skills before and after a physical assessment course in which it was indicated that there was an increase in the frequency of use of physical assessment skills among nurses after taking part in a physical assessment course as well as increase in confidence in performing physical assessment. In that study, respondents gave various reasons for infrequent use of physical assessment skills as inappropriate to clinical setting (42%), used only if problem suspected (30%), lack of familiarity with the skill (19%), insufficient time (5%) and performed by physicians (4%). The study concluded that the more confident a nurse is in performing physical assessment the more likely is the nurse to perform physical assessment frequently (O' Farrel et al, 2000). The limitation of that study was the small sample size of fourteen participants used for the survey. Duff et al (2007) also asserted that lack of support from colleagues and nursing administration, resistance to change, perceived insufficient time and authority to implement new practices were identified as some barriers to the implementation of respiratory assessment by nurses. The limitation of this study was the use of literature review other than actual data collection from participants. Other findings from another study indicated physicians performing physical assessment, inappropriate to clinical setting, no equipment available, physical assessment skills not considered as a nursing responsibility, no opportunity to use physical assessment skills, lack of time due to heavy workload, physical assessment used only if a problem is suspected and lack of support from colleagues were cited as barriers to the use of physical assessment skills by the participants (Sony, 1992).

## **Implications of Physical Assessment Practice for Nursing Practice**

Considering the implication of physical assessment practices from academic perspective, findings suggest a clear disconnect between nursing education and practice (Giddens, 2007). It is expected that the physical assessment skills taught in nursing education would be utilised in clinical practice to achieve desired outcomes of nursing practice, but this in reality is not so, as nurses are faced with some challenges in implementing their physical assessment skills in their daily practice. Whatever physical assessment skills are utilised by nurses, and the frequency of practice has implications for nursing practice and most of the researches done on the topic have drawn various implications based on the findings of the study. Findings reported from most of the studies in nursing literature suggest that among the many physical assessment skills taught in nursing programs only few are performed by nurses in clinical settings (Giddens, 2007; Secret, Norwood & Dumont, 2005). A gap in knowledge and skills utilisation among graduate nurses reflects current trends in practice as reported by Douglas et al (2014). If attention is not given to all the three domains in teaching physical assessment, then there will always be uncertainty about which assessment skill should be used and the competency with which that skill should be performed. Though there is clear indication of a gap between what is taught in nursing education and what is practiced in clinical setting, some of the studies have reported high utilisation of some skills than other studies. This brings out the evidence that there are variations in clinical implication of physical assessment practice among nurses across all settings. For instance, the clinical implication drawn from a survey involving advanced nurse practitioners (ANPs) and nurse



specialists was that, more educational opportunities should be provided on physical assessment to boost the confidence, skills and competency of these nurses to yield better nursing outcomes due to the advance roles they play in patient care (Shin et al, 2009). As a clinical implication of nurses' physical assessment practices, Zambas (2010) asserted that physical assessment was one of the ways for early detection of patient deterioration and urged that nurses needs support to build on their skills and competency in physical assessment. It may be inferred that nurses who do not perform physical assessment may put their patient at risk of deterioration that may not be noticed early for prompt intervention. In another study, the implication drawn from the survey was that incorporating physical assessment in the role of nurses was to be determined by the regulatory body of the profession (Lesa & Dixon, 2007). The study further indicated that physical assessment has become a requirement for registration with the nursing regulatory body and a standard for practice in New Zealand (Nursing Council of New Zealand, NCNZ 2004).

Many benefits are derived from using physical assessment from the perspective of practice. Some nursing literature suggests that accurate physical assessment leads the nurse to collect data to formulate a nursing diagnosis that will aid in planning effective care for the patient's current and potential problems (Fennessey & Wittman-Price, 2011). The integration of knowledge and skills of physical assessment leads to clinical judgment and decision making which is relevant to achieving better patient outcomes. The assertion made as clinical implication by this researcher was that physical assessment enhances safe and efficient patient care, therefore nurses must competently

complete the process of physical assessment on their patients. On the other hand, if nurses lack the skill to collect objective data and make decision for intervention then patients will be at risk of deterioration. For instance, in nurse triage, initial assessment by the nurse prioritises the order in which patients are seen by the physician but where this is not done preventable deaths and emergencies could not be controlled (Watson, 2006). The author shares in the opinion of West (2006) in the clinical implication drawn from a study that physical assessment by nurses have a positive impact on nursing care, therefore nursing administration should provide the appropriate support and in-service education to all grades of nursing staff on developing competency for physical assessment skills. Physical assessment by nurses in acute care settings have been reported to contribute to decrease in patients' clinical deterioration, hospital stay through prompt intervention in care. Duff et al. (2009) also asserted that nurses practicing respiratory assessment have been identified as instrumental in achieving early medical input, intervention and optimal patient outcomes. Another clinical implication drawn from a survey conducted among Japanese nurses was that a systematic educational program about physical assessment skills would be necessary to increase nurses' knowledge of physical assessment to enable them to use physical assessment skills more frequently and with less difficulty. In another study involving one hundred and twenty-three (123) APNs, the implication drawn was that over ninety percent (90%) of participants required in-depth education on health assessment (Shin et al, 2009).

Watson (2006) also reported that thirty percent (30%) of admissions to intensive care were preventable while up to forty percent (40%) were late admissions. This clearly suggests that failure by nurses to accurately and promptly utilise their assessment skills compromises the quality of care patients ought to receive from nurses. This researcher further argues that recording baseline observations is no longer sufficient but a greater level of skills is required of nurses, especially in this current climate of clinical effectiveness where patients demand value for money. A call was therefore made on nurses to be proactive in undertaking physical assessment as a basic responsibility. In a clinical implication drawn from a study, Scobie (2005) suggested that role modelling of physical assessment skills by senior nurses will promote greater confidence in the use of physical assessment skills among the less experienced nurses. Another implication drawn from the findings of a survey involving one hundred and fourteen graduate nurses was that practicing nurses need to be aware that new graduate nurses need support from colleagues and nurse managers to utilise and further develop their physical assessment skills. The study further suggested that a follow-up physical assessment workshop was necessary for continuing education for graduate nurses in clinical practice. This suggestion was based on findings from the study which indicated that nurses who attended workshop used physical assessment skills significantly as compared to nurses who were unable to attend such workshops. Therefore, nurses should be provided with basic equipment to enable them carry out physical assessment on patients (Sony, 1992). This calls for prioritization of nursing roles to allow nurses to perform physical assessment on patients since assessment is the first step of the nursing

process and failure to fully utilise it will compromise the quality of client care. Akao et al (2013) asserted that maternal deaths in the perinatal period occurred in health facilities lacking adequate and appropriate treatment by skilled birth attendants. This may imply that inability by nurses/ midwives to perform physical assessment has a negative impact on the quality of care rendered to patients.

### **Summary of Review of Related Literature.**

In the light of the literature reviewed there seems to be enough evidence that some studies have been done on nurses' knowledge and physical assessment practices in the clinical setting. The studies have covered level of knowledge, frequency of practice and barriers to nurses' use of physical assessment skills. Some of the studies indicated that, there were no statistically significant difference in level of knowledge and educational qualification and frequency of practice. However, some studies indicated the existence of statistically significant difference between level of knowledge and years of work experience and frequency of practice. Some of the studies went further to draw conclusions on the clinical implication of the findings from the studies while some suggested that curriculum on physical assessment in nursing education be reviewed to bridge the gap between what is taught and what is utilised in clinical practice. Whatever physical assessment skills are utilised by nurses, and the frequency of practice has implications for nursing practice and most of the researches done on the topic have drawn various implications based on the findings of the study. Findings reported from most of the studies in nursing literature suggest that among the many physical assessment skills taught in nursing programs only few are performed by nurses in clinical

settings (Giddens, 2007; Secrest et al, 2005). A gap in knowledge and skills utilisation among graduate nurses reflects current trends in practice as reported by Douglas et al (2014).

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assessment practices in our local setting using the Greater Accra Regional Hospital as a case study.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **Introduction**

This chapter deals with description of study procedures and the methods employed in the study. It deals principally with the study design, the population, sample size and sampling procedure, instrument, data collection procedure, and data analysis procedure.

#### **Research Design**

The design used for this study was the cross sectional survey using quantitative methods. This study aimed at determining the level of knowledge of physical assessment, frequency of physical assessment practice and the barriers to physical assessment practices among nurses. This design was considered appropriate because it enabled the researcher to determine and report the level of knowledge, frequency of practice and the barriers that existed among a cross section of nurses that practiced at the period. A quantitative method was employed as it enabled the researcher to apply statistical procedures for analysing the numerical data collected to determine nurses' level of knowledge and to describe their practices and the barriers pertaining to the participants.

#### **Research Setting**

The chosen setting for this study is the Greater Accra Regional (Ridge) hospital. It is found in the capital city of Ghana. The hospital can be located on the castle road and is opposite the Valco Trust house. It occupies a total land area of about 15.65 acres and covers the entire region as its catchment area serving over four million people. The Greater Accra Regional Hospital was

chosen because it is a tertiary facility offering health services to outpatients and inpatients with various conditions of health that offer nurses the opportunity to perform physical assessment on these patients. The hospital has a bed capacity of 191 and additional beds recorded as floor beds. It has an average of one hundred and fifty (150) bed- occupancy on daily basis. The regional hospital offers a wide range of health services covering medicine, surgery, reproductive and child health as well as specialty services such as urology, ophthalmic, diabetic, tuberculosis, ear/nose/throat (ENT) and Anti-retroviral therapy (ART) clinics for both inpatients and outpatients. It also receives referred patients from all hospitals in the region and beyond as well as Korle-Bu Teaching hospital. The Greater Accra regional hospital is one of the largest public health facilities in the region with a large number of nursing staff supported by auxiliary staff. The nurses have qualifications from State Registered Nurse Certificate, diploma, post diploma and bachelor degree in nursing as well as Maters degree.

### **The Study Population**

The study population for this research was nurses working in the Greater Accra Regional Hospital, specifically registered nurses who have been employed on full time basis. Statistics obtained from the in-service educator gave a target population of two hundred and eighty-six (286) qualified nurses/midwives. The participants were sampled from the population based on characteristics of interest to the researcher to make findings generalizable to the target population.



**Inclusion Criteria**

The study included all nurses/midwives working in all the units under the four departments of the hospital. Participants included only nurses with a State Registered Nurse certificate, diploma, post diploma, bachelor's degree in nursing as well as those with Master's Degree. Eligibility for participation was also based on full time employment as well as working in the general wards.

**Exclusion Criteria**

This is the non- eligibility criteria for participation. It included all nurses not directly involved with patients' care, such as nurse managers (DDNS), nurses working in administration and nurses working in the Central Sterilization Services Department (CSSD). Interns and students who were available during data collection were also exempted from the study.

**Sample Procedure**

This study employed census as a sample technique as all nurses/midwives in internal medicine, surgery, paediatric and obstetrics/gynaecological departments of the hospital were included. The technique was applied to eligible nurses available during the data collection period and consented to participate in the survey. The in-service coordinator provided information on the number of eligible research participants in all the units of the four departments. The participants were contacted in the various units of the four departments of the hospital with an introduction letter obtained from the hospital administration.

### **Sample Size**

The sample size for the study was two hundred and sixty-two (262) nurses/midwives representing the number that participated in the study. Five (5) participants did not return their questionnaires. This brings the total number of participants to two hundred and fifty-seven (257), giving a response rate of 98%.

### **Research Instrument**

The main instrument used for this study was a self-administered questionnaire (Appendix 1). The questionnaire used for this study was adapted from previous studies on physical assessment practices and barriers to physical assessment use. The tool had been used in Japan and Australia and found to be reliable. Internal consistency reliability was applied because the measure of level of knowledge involved summing items scores (Polit & Beck, 2008). In general, values below .60 represent poor, .60 to .69 represent acceptable, .70 to .79 represent moderate, .80 to .89 represent good, above .90 represent excellent. The tool was modified to the relevance of the setting by changing some of the responses on level of knowledge and frequency of practice. The first part consisted of demographic characteristics of participants and other information such as workload, shift system and additional duties. The second part consisted of a twenty-six item physical assessment skill to determine level of knowledge of physical assessment using a four-point likert scale for the responses where 4 = Can perform with ease, 3 = Able to perform but with some difficulty, 2 = Need assistance to perform and 1 = Cannot perform at all. The third part consisted of a twenty-six item table to identify frequency of physical assessment practice using a four-point likert scale where 4 = Always,

3 = Often, 2 = Sometimes and 1 = Not at all. The fourth part consisted of a thirty-eight item table to identify barriers to physical assessment practice using a four- point likert scale for the responses where 4 = Strongly agree, 3 = Agree, 2 = Disagree and 1 = Strongly disagree. Data collection was categorised into four sub-sections as follows:

Section A: Demographic data and other

Section B: Knowledge of physical assessment skills.

Section C: Frequency of physical assessment practice.

Section D: Barriers to physical assessment practice.

Additionally, secondary data from other surveys, organisational records and data were used to augment the collected primary data. This was done to appreciate the theoretical and conceptual framework of the subject under study.

#### **Data Collection Procedure**

The data collection tool was pre-tested at La General Hospital, which is within the region and shares similar characteristics with the Greater Accra Regional (Ridge) hospital. Twenty nurses with same characteristics as the participants in the sample size were used to pre-test the data collecting tool to ensure validity and reliability. Some of the items in the questionnaire were reworded and some rearranged. All irrelevant items in the questionnaire were deleted before the final data collection was carried out.

Prior to data collection a letter was obtained from the School of Nursing indicating approval and ethical clearance of the study and sent to the Research Review Committee of the Greater Accra Regional Health Directorate to obtain permission to carry out the study. A copy of an approval

letter was also submitted to the administration unit of the Greater Accra Regional (Ridge) hospital to notify them of the intended study to obtain permission for the study (Appendix IV). Participants who formed the sample size were given verbal and written explanation of what the study was about and their responsibility as participants. A written informed consent (Appendix II) clearly stating risks, benefits, confidentiality and voluntary participation was also given to participants for them to read and ask questions about anything that they did not understand concerning the study. Participants were informed that participation is voluntary. They were also assured of confidentiality of their responses as names were not required in the demographic data. Participants were informed to notify the person collecting the data of a change in their decision not to continue with participation in the study.

Nurses who consented to participate in the study were given a structured questionnaire to answer and return them to the researcher after they have read and signed the consent form. The questionnaires were distributed by the researcher and collected by same. Participants who for interruptions could not complete the questionnaire were left to complete questionnaire for the researcher to collect at the end of their shift. This was done consecutively on a daily basis during the day shifts. Nurses/ midwives on the night shift were contacted in the early hours of the morning prior to the end of their shift. The distribution and retrieving of the questionnaires was carried out between the month of May and June 2016. By the end of the period, the researcher had been able to retrieve 257 out 262 questionnaires distributed, representing 98% of the total.

## **Validity and Reliability of Research Instrument**

Validity refers to the degree to which an instrument measures what it is supposed. Content validity was used. Content validity is the extent to which an instrument contains an appropriate sample of items for the construct being measured and adequately covers the construct domain (Polit & Beck, 2008). Content validity was verified by expert teaching physical assessment in nursing education. Construct validity was also ensured by choosing questions to cover all aspects of the topic being investigated and adhering to rules of setting research questions, which involved the avoidance of double barrel, double negation ambiguity and the use of jargons. The checklist for the physical assessment skills was validated by an expert in teaching physical assessment skills and the research supervisor.

Reliability is the degree of consistency with which an instrument measures what it is supposed to be measuring. Internal consistency reliability was obtained using Cronbach's alpha. The tool was also pre-tested using the items on the checklist among twenty nurses at the La General Hospital and effected the necessary changes before carrying out final data collection. The outcome of the pre-testing was also compared to what existed in literature.

## **Data Analysis Procedure**

Data collected were first screened for missing and incomplete responses. It was then sorted and categorised before analysing it using Statistical Product and Service Solutions (SPSS 22). The findings were presented in the form of frequency tables, pie and bar charts as appropriate. The means for age and years of work experience were determined. Research questions 1 – 3 were answered using means and standard deviations. Again,

Analysis of Variance (ANOVA) and Spearman's rank correlation and descriptive statistics were used for the analysis.

### **Ethical Consideration**

Ethical consideration in research addresses the rights of research participants, their protection from harm or injury, privacy, confidentiality, as well as the dignity of the participants. Ethical clearance was sought and approval given by the Institutional Review Board of University of Cape Coast by following all guidelines for ethical clearance (Appendix III). Participants were given written informed consent that spelt out the details of the study to obtain their consent to participate in the study. The informed consent also clearly indicated that participation is voluntary and withdrawal at any stage of the study is possible without any consequence and also no incentive is involved in participation. Participants' responses will be kept confidential as name was not included in the demographic data (Appendix II). Verbal explanations were given by the researcher to all participants on concerns raised in the study.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### **Introduction**

This chapter presents analysed results obtained from questionnaires that were administered. With the use of frequencies, percentages and such diagrams as bar and pie charts, the data obtained were presented and have been interpreted to provide clear understanding to the study.

#### **Demographic Characteristics and Other**

The gender, age, educational qualification, present rank, present department, type of duties, years of work experience, shift system and additional responsibility of the nurses/midwives in the Greater Accra Regional (Ridge) Hospital have been presented. Demographic characteristics such as age, gender and educational qualification of the nurses' are vital in appreciating respondents' opinion about the knowledge and practice of physical assessment among nurses. In all, 262 questionnaires were administered and 257 were retrieved, representing 98% response rate. Mean age and standard deviation were  $28.3 \pm 8.9$  years.

#### **Age distribution of respondents**

Table 1: *Age Distribution of Respondents*

<b>Age (M=28.3)</b>	<b>Frequency</b>	<b>Percentage %</b>
20 – 30	165	64
31 - 40	49	19
41 – 50	31	12

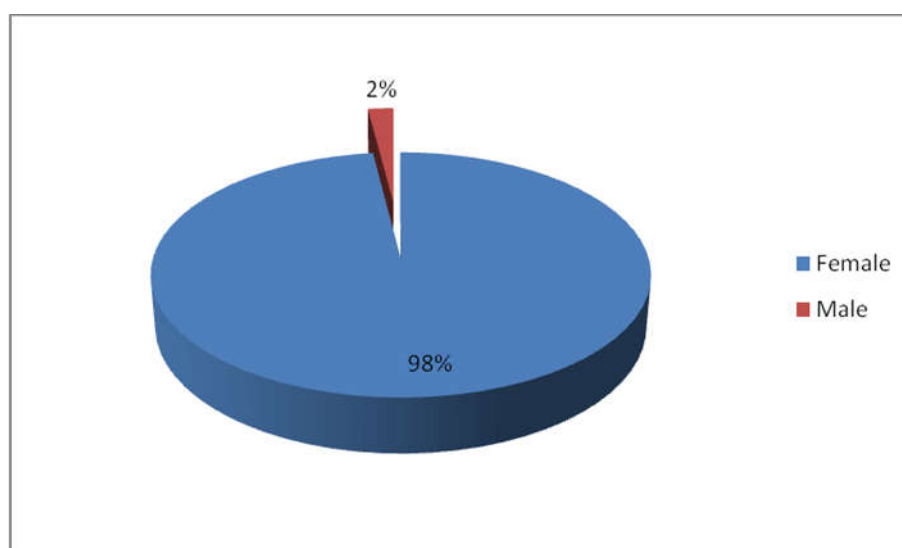
Table 1 continued *Age distribution of respondents*

51 – 60	12	5
<b>Total</b>	<b>257</b>	<b>100</b>

**Source: Field Survey, 2016**

In terms of age, the majority of the respondents (64%) were aged between 20 – 30 years and 5% were aged between 51 – 60 years. This suggests that a greater part of the work force is derived from the young nurses/midwives.

### **Gender Distribution of Respondents**



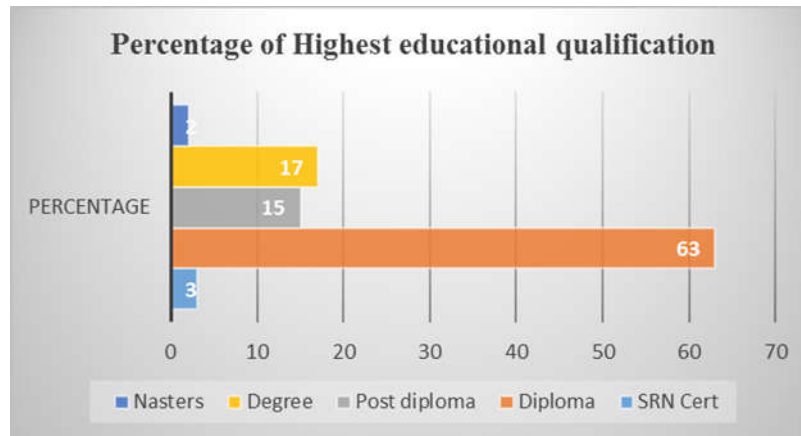
**Figure 1: Gender distribution of respondents**

**Source: Field Survey, 2016**

Figure 1 shows the gender distribution of respondents. The result shows that 253 of the respondents were female. The domino effect thus suggests that there are more females than males in the study population, consistent with general trends in Ghana where females dominate the nursing profession.



### Highest Educational qualification

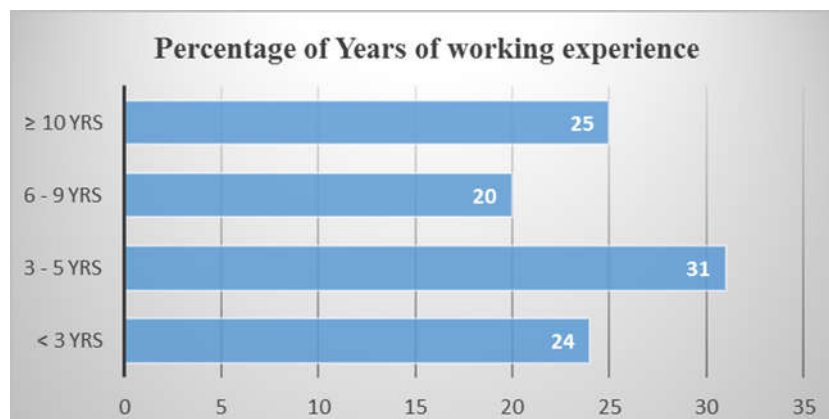


**Figure 2: Highest Educational Qualifications of Respondents**

Source: Field Survey, 2016

As regards their educational levels, 63% have had diploma while 2% of the respondents have had postgraduate/masters. This shows the educational strength of nurses/midwives working at the Greater Accra Regional (Ridge) Hospital.

### Years of working experience



**Figure 3: Years of Working Experience of Respondents**

Source: Field Survey, 2016

The data presented in Figure 3 indicates that the years of working experience of respondents was 3 - 5 years (31%) and 10 years and more was 25%. The respondents with less than 3 years working experience had 24 % while those with 6- 9 years working experience had 20%. The mean for years of working experience was 7.4.

### **Present Rank**

Table 2: *Present Rank of Respondents*

	Frequency	Percentage %
Staff nurse/midwife	112	44
Senior staff nurse/midwife	59	23
Nursing officer	33	13
Senior nursing officer	29	11
Principal nursing officer	24	9
Total	257	100

Source: Field Survey, 2016

On the present rank of respondents, 44% are staff nurses/midwives as the lowest rank while 9% of the respondents are principal nursing officers. This implies that staff nurses/midwives formed the majority of respondents in the study. It can be inferred from the result that, a greater part of the work force at the Greater Accra Regional Hospital is built on staff nurses/midwives.

### Present department

Table 3: *Present Department of Respondents*

	Frequency	Percentage %
Internal medicine	46	18
Surgery	78	30
Paediatric	40	16
Obstetrics/gynaecology	93	36
Total	257	100

Source: Field Survey, 2016

Table 3 shows present department of respondents. 36% of the respondents are in the obstetrics/gynaecology department whilst only 16% of the respondents are in the Paediatric department. This shows that majority of respondents are in the obstetrics/gynaecology department.

### Type of Duties

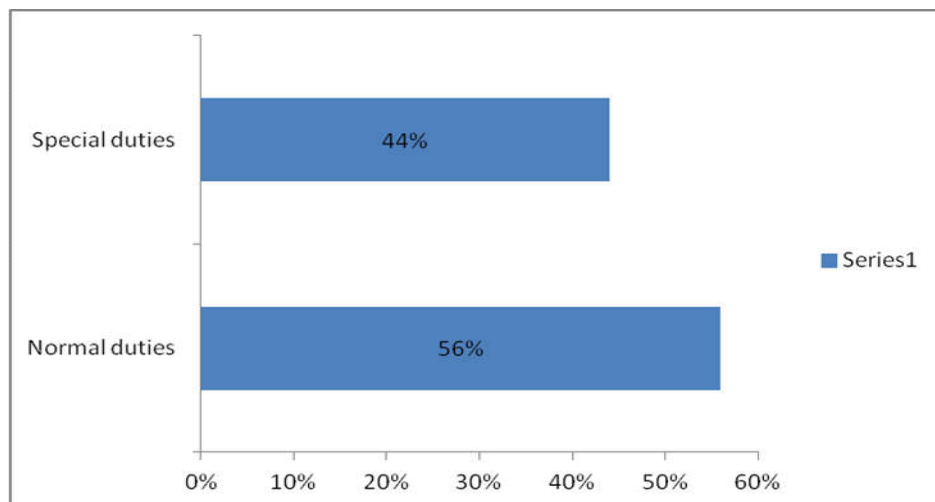


Figure 4: Percentage distribution of duties of respondents

Source: Field Survey, 2016

As indicated in figure 4, when respondents were asked about their type of duties, 144 (56%) of the respondents indicated they carry out general duties while 113 (44%) of the respondents performed special duties. This means that majority of respondents are general nurses.

### Shift Systems

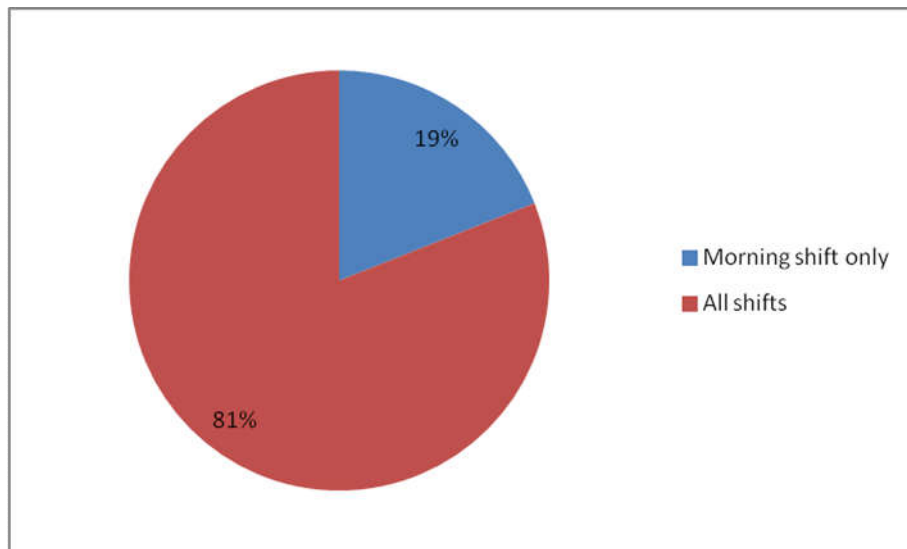


Figure 5: Shift systems of respondents

Source: Field Survey, 2016

As seen in figure 5, when respondents were asked their shift systems, 81% of respondents indicated they run all shifts. Only 19% of the respondents run morning shifts only. These are mainly supervisors and also nurses/midwives who run specialty clinics. The rest of the respondents run all shifts as indicated by the result.

## **Additional Responsibility**

Table 4: *Additional Responsibility of Respondents*

	Frequency	Percentage %
Always	7	3
Sometimes	77	30
Not at all	173	67
Total	257	100

As shown in Table 4, when respondents were asked about carrying out additional responsibilities which were not core nursing responsibilities, 67% of the respondents indicated “not at all” and 3% indicated “always”. This means that majority of the respondents are not assigned additional responsibility. It may also be inferred from the responses that only a few nurses get additional responsibility, thus would not attribute taking up of additional responsibility as preventing them from performing physical assessment on their patients.

### **Research Question 1**

#### **Assessment of knowledge and practice of physical assessment among respondents**

This section analyses responses about knowledge and practice of physical assessment among respondents. The various dimensions of knowledge and practice of physical assessment among respondents are presented in the subsequent paragraph.

### **Knowledge on Physical Assessment**

Respondents were requested to provide data on twenty- six (26) statements on knowledge of physical assessment they had participated using a four-likert scale for the responses. A scale of  $\leq 2.0$  representing “poor”, 2.1 – 2.9 representing good, 3.0 – 3.9 representing “very good”, and  $\geq 4.0$  representing “excellent”, was used. The twenty six statements included assessing vital signs (blood pressure, temperature, respiratory rate, pulse rate) and oxygen saturation, assessing consciousness level, testing for skin turgor, examining for skin lesions, testing for pitting oedema, examining external eyes, evaluating extra-ocular movements, testing for response of pupils of the eyes, examining nose and oral cavity, palpating lymph nodes of the neck, assessing carotid pulses, assessing for jugular venous pressure, palpating thorax for vocal fremitus, percussing the thorax, auscultating the lungs for breathing sounds, palpating the precordium for point of maximal impulse, auscultating the heart for murmurs, palpating for breast lumps, palpating for axillary nodes, auscultating for bowel sounds, percussing the abdomen, palpating the abdomen, testing for motor function and range of movement in any of the extremities, observing gait, assessing coordination and testing deep tendon reflexes. The data was deemed useful because these characteristics assist to ascertain the knowledge on physical assessment among nurses in the Greater Accra Regional (Ridge) Hospital.

Table 5: *Knowledge of Physical Assessment among Respondents*

Physical assessment skills	4	3	2	1	Mean	SD
Vital signs	234	23	0	0	<b>3.9</b>	1.82
Consciousness level	102	132	23	0	3.1	0.84
Skin turgor	213	42	2	0	<b>3.8</b>	1.82
Skin lesions	217	38	2	0	<b>3.8</b>	1.14
Test pitting oedema	215	39	3	0	<b>3.8</b>	1.14
Examine external eyes	190	63	3	1	<b>3.7</b>	1.09
Evaluate extra-ocular movements	107	113	32	5	<b>3.2</b>	0.88
Response of pupils of the eyes	93	130	34	0	<b>3.2</b>	0.88
Examine nose and oral cavity	93	119	40	5	<b>3.1</b>	0.84
Palpate lymph nodes of the neck	174	69	12	2	<b>3.6</b>	1.04
Assess carotid pulses	181	60	14	2	<b>3.6</b>	1.04
Assess JVP	160	74	17	6	<b>3.6</b>	1.04
Palpate vocal fremitus	5	26	80	146	<b>3.5</b>	1.00
Percuss thorax	8	24	99	26	<b>1.6</b>	0.95
Auscultate breath sounds	7	28	89	133	<b>1.7</b>	0.92
Palpate precordium for PMI	3	16	107	131	<b>1.6</b>	0.95
Auscultate heart murmurs	13	27	117	100	<b>1.6</b>	0.95
Palpate breast lumps	146	85	24	2	<b>1.8</b>	0.88
Palpate axillary nodes	153	74	29	1	<b>3.5</b>	1.00
Auscultate bowel sounds	14	34	141	68	<b>3.5</b>	1.00
Percuss abdomen	11	41	126	79	<b>1.9</b>	0.84
Palpate abdomen	64	60	83	50	2.5	0.74

*Table 5 continued Knowledge of Physical Assessment among respondents*

Test motor functions	24	63	118	52	<b>2.2</b>	0.77
Observing gait	228	25	4	0	<b>3.9</b>	1.19
Assessing coordination	65	66	97	29	<b>2.6</b>	0.75
Testing deep tendon reflexes	1	29	124	103	<b>1.7</b>	0.91

*Mean Ranges:*

*Can perform with ease - 4                      Able to perform but with some difficulty- 3*

*Need assistance to perform - 2              Can not perform at all - 1*

Grand Mean                                      = 2.78

Average Standard Deviation ± 0.69

According to the data presented in Table 7, out of the aggregate of 6682 responses provided by respondents to the twenty -six statements on knowledge of physical assessment, 40.75% of responses went to “able to perform with ease”, “can perform but with some difficulty” had 22.46%, “need assistance to perform” scored 21.27%, and “cannot perform at all” scored 15.52%. The results generally suggest that majority of the participants can perform with ease the procedures on physical assessment.

Responses on the procedures on knowledge of physical assessment have been elaborated. On “assessing vital signs (blood pressure, temperature, respiratory rate, pulse rate) and oxygen saturation” 91% of the respondents indicated they can perform with ease. Only 9% said they are able to perform but with some difficulty. A mean score of 3.9 suggest that respondents have very good knowledge on assessing vital signs and oxygen saturation rate.

On “assessing consciousness level” 51% said they are able to perform but with some difficulty whilst 9% indicated that they need assistance to perform. A



mean score of 3.1 is indicative of respondents having a very good knowledge on assessing consciousness level of patients.

On “testing for skin turgor” majority of the respondents (82%) pointed out that they can perform with ease and 1% needs assistance to perform. A 3.8 mean score shows that respondents have a very good knowledge of testing for skin turgor.

Also on, “examining for skin lesions” 84% can perform with ease whilst 1% needs assistance to perform. The result shows that respondents have a very good knowledge of examining skin lesions based on a mean score of 3.8.

On “testing for pitting edema” revealed that 84% of the respondents can perform with ease and 15% they are able to perform but with some difficulty. Only 1% needs assistance to perform. A mean of 3.8 demonstrate that respondents have a very good knowledge of testing for pitting edema.

On examining external eyes, majority (74%) indicated they can perform with ease while 25% and 1% of the respondents said they are able to perform but with some difficulty and need assistance to perform respectively. The result indicates that respondents have a very good knowledge of examining external eyes indicated by a mean of 3.7.

On evaluation of extra ocular movements, results show that 42% can perform with ease, 44% can perform but with some difficulty, 12% need assistance to perform and 2% cannot perform at all. A mean score of 3.7 shows that respondents have very good knowledge on evaluating extra ocular movement.

On testing for response of the pupils, 37% of respondents indicated “can perform with ease, 50% can perform but with some difficulty and 13% need assistance to perform. The result indicates that respondents have very good knowledge with regards to this procedure, shown by a mean of 3.2.

On examining oral cavity, respondents indicated that they can perform with ease by 37%, can perform but with difficulty by 46% and need assistance to perform by 15%. Only 2% cannot perform this task at all. Again, respondents have demonstrated having a good knowledge of examining oral cavity by 3.2 mean score.

On palpating lymph nodes, results show that 68% of respondents can perform this task with ease, 26% can perform but with some difficulty, while 5% need assistance to perform it. Only 1% cannot perform this procedure at all. A mean score of 3.6 indicates that respondents have a very good knowledge of palpating lymph nodes.

On assessing carotid pulses, 70% of the respondents can perform with ease, while 24% can perform but with some difficulty. 5% and 1% of respondents indicated “need assistance to perform” and “cannot perform at all” respectively. The mean score (3.6) suggests that respondents have very good knowledge with regards to assessing carotid pulses.

On palpating precordium for PMI, only 1% of respondents can perform with ease, while 42% need assistance to perform and 51% cannot perform at all. 6% can perform but with some difficulty. The result shows that respondents have poor knowledge of palpating for PMI based on mean score of 1.6.

Only 5% of respondents can auscultate thorax for heart murmurs with ease, while 10% can perform but with some difficulty. Also, 46% can perform this procedure but with some difficulty, while 39% of respondents cannot perform auscultation of the thorax for murmurs at all. A mean score of 1.6 suggests that respondents have poor knowledge of auscultating the thorax for heart murmurs.

On palpating for breast lump, 57% indicated can perform with ease, 23% can perform but with some difficulty, 9% need assistance to perform and 1% cannot perform at all. The result indicates that, respondents have poor knowledge of palpating breast lumps based on a mean score of 1.8.

On palpating axillary nodes, 59% of respondents can perform with ease, 29% can perform but with some difficulty and 12% need assistance. A mean score of 3.5 shows that respondents have very good knowledge of palpating axillary nodes. Only 6% of respondents can perform this with ease.

On percussing the abdomen, only 4% can perform with ease, 16% can perform but with some difficulty, 49% need assistance to perform and 31% cannot perform at all. Respondents have poor knowledge of percussing abdomen with on a mean score of 1.9.

The results show that 25% of respondents can palpate abdomen with ease while 23% can perform but with some difficulty. 32% need assistance to perform this procedure and 20% cannot perform it at all. A mean score of 2.5 suggests that respondents have good knowledge of palpating the abdomen.

On testing for motor function of any of the extremities, only 9% can perform with ease while 24% can perform but with some difficulty. 46% of respondents indicated they need assistance to perform this task while 20%

cannot at all assess motor function of the extremities. The result suggests that respondents have good knowledge of performing this assessment.

On observing gait, respondents indicated they can perform with ease by 89%, while 10% can perform but with some difficulty. Only 1% need assistance to perform. The result shows that, respondents have a very good knowledge of observing gait of patients with a mean score of 3.9,

Twenty-five percent (25%) of respondents can assess coordination in movements with ease, while 26% can perform this assessment with some difficulty, and 38% of the respondents need assistance to assess coordination in movement and 11% cannot at all perform this assessment. The mean score (2.6) suggests that respondents have good knowledge of performing this assessment.

On testing deep tendon reflexes, 4% of respondents can perform with ease, while 48% of respondents can perform this assessment but with some difficulty. Also, 12% of respondents need assistance to test deep tendon reflexes. A mean of 1.7 indicates respondents have poor knowledge on this assessment.

The results of this study show that, respondents have a very good knowledge on assessment that require observation/inspection based on a grand mean of 3.4. Respondents have a very good knowledge also on assessment that require the skill of palpation based on a mean score of 3.0. However, respondents have a good knowledge of assessment that require the skill of auscultation indicated by a mean of 2.3, while a mean score of 1.7 is suggestive of respondents having poor knowledge of assessment that require the skill of percussion.

In summary, as indicated above by mean scores, majority of the respondents have a good knowledge of physical assessment based on a grand mean of 2.78.

## Research Question 2

### Physical Assessment Practice among Respondents

*Always - 4    Often – 3    Sometimes – 2    Not at all - 1*

Table 6: *Frequency of Physical Assessment Practice among Respondents*

Physical assessment skills	Always (4)	Often (3)	Sometimes (2)	Not at all (1)	Mean	SD
Vital signs	186	57	14	0	3.7	1.09
Consciousness level	71	84	77	25	2.8	0.77
Test skin turgor	31	85	87	54	2.4	0.75
Examine skin lesions	30	99	92	36	2.5	0.74
Test pitting edema	18	72	109	58	2.2	0.77
Examine external eyes	13	39	113	92	1.9	0.84
Evaluate extra ocular movements	6	18	107	126	1.6	0.96
Test response of pupils	9	20	121	107	1.7	0.92
Examine nose and oral cavity	6	22	111	118	1.7	0.92
Palpate lymph nodes of the neck	7	28	127	95	1.8	0.88
Assess carotid pulses	5	38	134	80	1.9	0.84
Assess JVP	6	31	109	111	1.7	0.92
Palpate vocal fremitus	0	2	13	242	1.1	1.19
Percuss thorax	0	4	12	241	1.1	1.19
Auscultate breath sounds	1	3	19	234	1.1	1.19
Palpate precordium for PMI	0	0	12	245	1.0	1.25
Auscultate heart murmurs	1	7	33	216	1.2	1.14
Palpate breast lumps	19	56	62	120	2.0	0.81

*Table 6 continued Frequency of Physical Assessment Practice among Respondent*

Palpate axillary nodes	12	52	71	122	1.8	0.88
Auscultate bowel sounds	4	2	30	221	1.2	1.14
Percussing the abdomen	2	5	27	223	1.2	1.14
Palpate abdomen	55	41	39	122	2.1	0.79
Test motor functions	4	11	58	184	1.4	1.04
Observing gait	131	67	45	14	3.2	0.88
Assessing coordination	13	21	51	172	1.5	1.00
Test deep tendon reflexes	0	0	28	229	1.1	1.19

**Source: Survey data, 2016**

*Mean Ranges:*

Grand Mean = 1.87

Average Standard Deviation  $\pm 0.73$

On physical assessment practices, the distribution of responses was based on a four- likert scale as presented in Table 6. A scale of  $\leq 2.0$  representing “poor”, 2.1 – 2.5 representing “satisfactory ”, 2.6 to 3.0 representing “good”, 3.1 to 3.5 representing “very good” and  $\geq 3.6$  representing “excellent” was used to determine frequency of practice. The findings revealed that 72% of respondents assess vital signs always, 23% do it often, and 5% assess vital signs sometimes. Vital signs assessment among respondents is excellent with a mean score of 3.7.

On assessing consciousness level of patients, 27% perform the assessment always, 33% perform it often, while 30% and 10% of respondents assess consciousness level “sometimes” and “not at all” respectively. Respondents have excellent practice of assessment of consciousness level with a mean score of 3.7.

On testing for skin turgor, 12% of respondents perform the assessment always, while 33% perform the assessment often and 34% test skin turgor often. Twenty – one percent (21%) of respondents do not assess skin turgor at all. The result shows that respondents' performance on assessment of skin turgor is satisfactory with a mean score 2.4.

The result indicates that 12% of respondents examine for skin lesions on patients always, while 38% perform this assessment often. Thirty – six percent of respondents examine skin lesions sometimes and 14% do not at all examine skin lesion on patients. The result suggests that respondents' assessment of skin lesions is satisfactory with a mean score of 2.5.

The result shows that 7%, of respondents test for pitting edema always while 28% perform this procedure often, 42% of respondents test for pitting edema sometimes and 23% do not at all perform this assessment. Respondents' assessment of pitting edema with regards to frequency of practice is satisfactory with a mean score of 2.2.

On examining external eyes, only 5% of respondents perform this assessment always, while 15% perform this assessment often. Respondents who indicated they examine external eyes sometimes was 44% whereas 36% did not perform this procedure at all. The results indicate that respondents' performance on examining external eyes is poor with a mean score of 1.9.

On evaluation of extra-ocular movements, only 2% perform it always while 7% perform this assessment often. Respondents who performed this assessment sometimes was 42% whereas the remaining 49% did not evaluate extra-ocular movements at all. These results suggest that respondents have

poor performance of assessing extra-ocular movements with a mean score of 1.6.

Only 3% of respondents indicated that they test for pupils' response to light "always", while 8% perform this assessment "often" 47% of respondents test for pupils' response to light "sometimes" and 42% represents respondents who did not perform this assessment "at all". These results suggest that assessment of pupils' response to light is poor among respondents with a mean score of 1.7.

On "examining for nose and oral cavity, 2% accounted for respondents who perform this assessment "always" while 9% examine the nose and oral cavity "often". Respondents who performed this procedure "sometimes" was 43%, whereas majority (46%) did not examine the nose and oral cavity "at all". Examining of nasal and oral cavity was poor a mean score of 1.7.

The responses indicate that, only 3% of respondents palpate lymph nodes of the neck "always", while 11% perform this assessment "often", 49% accounted for respondents who palpate lymph nodes of the neck, with the remaining 37% accounting for not performing this assessment "at all". It could be inferred from the results that, respondents have poor practices in terms of palpation of lymph nodes of the neck with a mean score of 1.8.

On assessment of carotid pulses, only 2% perform the assessment "always", while 15% indicated that they assess carotid pulses "often". Respondents who assessed carotid pulses "sometimes" accounted for 52% whereas 31% did not perform this assessment "at all". The responses show that, performance on assessment of carotid pulses is poor among respondents with a mean score of 1.9.



While 2% of respondents assess jugular venous pressure (JVP) “always”, 13% performed this assessment “often”, and 42% assess jugular venous pressure “sometimes”, with the remaining 43% not performing this assessment at all. These results suggest that, respondents have poor performance of assessing jugular venous pressure, on a mean score of 1.7.

Respondents who palpate precordium for vocal fremitus “always” accounted for only 1%, whereas respondents who performed this assessment was 5%. However, 94% of respondents indicated “not at all” for palpating for vocal fremitus. These results suggest that, respondents’ assessment of PMI was poor with a mean score of 1.1.

While 94% of respondents did not percuss the thorax at all, 5% of respondents percuss the thorax “sometimes” and the remaining 1% perform this assessment “often”. A mean score of 1.1 is an indication of poor performance on percussion of the thorax among respondents.

With regards to auscultation of the chest for breath sounds”, respondents indicated that, only 1% perform this assessment “often”, 8% perform it “sometimes” 91% “not at all” These results generally suggest that, respondents have poor performance in terms of chest auscultation, with a mean score of 1.1.

While only 5% indicated “sometimes” for palpating precordium for pulse of maximal impulse (PMI), the remaining 95% of respondents indicated “not at all” for this assessment. These results show that respondents perform poorly regarding palpation of the precordium for PMI with a mean score of 1.1.

On “auscultation heart murmurs”, majority (84%) indicated “not at all” and only 3% indicated “often” for this assessment, while 13% indicated “sometimes” for auscultating for heart murmurs. These responses generally suggest that respondents performed poorly on auscultation for heart murmurs with a mean score of 1.2.

Regarding palpation for breast lumps, majority (47%) of the respondents indicated “not at all” for this assessment, while 24% indicated “sometimes”, 22% of respondents indicated “often” whereas 7% indicated “always” for palpating for breast lumps. These results show that respondents performed poorly on palpating for breast lumps, indicated by a mean score of 2.0.

Only 5% of respondents palpate axillary lymph nodes “always”, while 20% of respondents perform this assessment “often”. Also, 28% of respondents palpate axillary lymph nodes “sometimes”, whereas 28% of responses went for “not at all”. A mean score of 1.8 suggests that respondents have poor performance on palpating axillary lymph nodes.

The majority (86%) of respondents indicated they do “not at all for auscultation of bowel sounds”, only 2% of respondents indicated “always”, while 1% also indicated “often” and 11% indicated “sometimes”. The results for this statement suggest that respondents performed poorly in terms of auscultating bowel sounds, indicated by a mean score of 1.2.

The results show that majority (87%) indicated “not at all” for percussing abdomen, while 10% indicated “sometimes” and 2% indicated “often”, with only 1% indicating always for this assessment. It could be

inferred from a mean score of 1.2 that respondents performed poorly with regards to percussion the abdomen.

Regarding palpation of the abdomen, 21% of respondents indicated “always”, while “often” was indicated by 16% of respondents. Also, 15% and 47% of respondents indicated “sometimes” and “not at all” respectively. A mean score of 2.1 for this assessment suggests abdominal palpation was satisfactory among respondents.

On “testing for motor function of the extremities”, majority (72%) of the respondents indicated “not at all”, while 23% indicated “sometimes” for this assessment and only 1% and 4% indicated “always” and “often” respectively. Testing for motor function of the extremities was poor among respondents with a mean score of 1.4.

Responses from the study show that 51% observe gait of patients “always”, while 26% of respondents perform this assessment “often”, Respondents (18%) indicated “sometimes” and 5% indicated “not at all” for observing gait. The results suggest very good practice among respondents with on a mean score of 3.2 for observing gait of patients.

Majority (67%) of respondents indicated they do not perform assessment of coordination of movement, while 20% indicated “sometimes”. Only 5% indicated “always” and the remaining 8% indicated “often”. It could be inferred from the results that respondents have poor practices regarding of assessment of coordination of movements with a mean of 1.5.

Majority of respondents accounting for 89%, indicated “not at all” for testing deep tendon reflexes, while 11% indicated “sometimes” for this assessment. A mean score of 1.0 is suggestive of poor performance among respondents regarding testing of deep tendon reflexes.

In summary, the results from this survey show that respondents have satisfactory practices for assessment of procedures that require the skill of observation/inspection with a mean score of 2.3. Also, the mean for all assessment procedures that require the skill of palpation is 1.7, which suggests that respondents have poor practices in terms of performing these assessment procedures. All assessment procedures that require the skill of percussion scored a mean of 1.2. This result is indicative of poor performance among respondents with respect to how frequently these assessments are carried out, while or practices for assessment procedures that require the skill of auscultation is poor with on a mean of 1.0. In general, physical assessment practices among respondents is poor for the assessment procedures listed in this survey with a grand mean of 1.9.

### **Research Question 3**

#### **Barriers to Physical Assessment Practices**

The study nurses were requested to indicate their levels of agreement with each of the statements relating to barriers to the practice of physical assessment. The major barriers to the practice of physical assessment are reliance on others and technology, specialty area, lack of nursing role models, lack of confidence, lack of time and interruptions, lack of resources/equipment and lack of ward culture. The barriers were rated in terms of strength using a scale of  $\leq 2.0$  representing “very weak”, 2.1 – 2.5 representing “weak”, 2.6 –

3.0 representing moderate, 3.1 – 3.5 representing “strong” and  $\geq 3.6$  representing “very strong”.

### Reliance on Others and Technology for Assessment

*Strongly Agree - 4    Agree – 3    Disagree– 2    Strongly Disagree - 1*

Table 7: *Distribution of Responses on Reliance on Others and Technology*

Reliance on others and technology	SA	A	DA	SDA	Mean	SD
Physical assessment is the responsibility of medical or allied health staff.	7	8	113	129	1.6	0.96
I tend to rely on monitoring equipment to collect assessment data on patients.	2	15	112	128	1.6	0.97
I see physical assessment as something only doctors do.	1	20	117	119	1.6	0.95
Nurses do not need physical assessment to do their work well.	1	9	116	131	1.5	0.98
Use of technology reduces the need for nurses’ physical assessment practices.	1	14	111	131	1.5	0.98

*Table 7 continued Distribution of Responses on Reliance on Others and Technology*

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I can gather all the physical assessment data I need using electronic monitoring devices.	0	14	135	108	1.6	0.94
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Source: Survey Data, 2016

Grand Mean = 1.67

Average Standard Deviation ± 0.82

According to the data presented in Table 7, out of the aggregate of 1542 responses provided by respondents to the six statements on reliance on others and technology as a barrier to the practice of physical assessment, 0.78% went to strongly agree (SA), agree (A) had 5.19%, disagree (DA) 45.65%, and strongly disagree (SDA) 48.38%. The responses for the individual statement under this barrier are elaborated below.

According to responses on whether physical assessment is the responsibility of medical or allied health staff, “Strongly Agree” scored 3%, “Agree” scored 3%, “Disagree” scored 44%; and “Strongly Disagree 50%. The result generally suggests that majority strongly disagree that physical assessment is the responsibility of medical or allied health staff. A mean score of 1.6 suggests that this is a very weak barrier with regards to strength.

On whether nurses can gather all the physical assessment data they need using electronic monitoring devices, their responses were as follows: “Agree” (5%); “Disagree” (53%) and “Strongly Disagree” (42%). The result implies nurses disagree that they can gather all the physical assessment data

they need using electronic monitoring devices. A mean score of 1.6 suggests that this is a very weak barrier in terms of strength.

On the statement “I see physical assessment as something only doctors do”, 46% disagree, 46% strongly disagree and only 8% agree. These responses indicate that this barrier is a very weak one based on a mean score of 1.6.

On the statement “use of technology reduces the need for nurses’ physical assessment practice”, 1% indicated “Strongly agree”, 5% indicated “Agree”, 43% indicated “Disagree” and 51% indicated “Strongly Disagree”. This means, nurses strongly disagree that the use of technology reduces the need for nurses’ physical assessment practice. This barrier can be classified as a very weak barrier based on a mean score of 1.5.

On whether nurses do not need physical assessment to do their work well, their responses were as follows: 4% indicated “Agree”; 45% indicated “Disagree” and 51% indicated “Strongly Disagree” and none of the respondents indicated Strongly Agree. The result implies nurses strongly disagree that do not need physical assessment to do their work well. Thus this statement is a very weak barrier with a mean score of 1.5.

The means for the six individual assertions under this barrier all fall within weak barriers. The grand mean is 1.6, which suggests it is a very weak barrier ( $\leq 2.0$ ). The results suggest that the nurses strongly disagree in terms of strength that, their reliance on others and technology is a barrier to the practice of physical assessment. Therefore, in summary as indicated above the nurses strongly disagree that their reliance on others and technology is a barrier to the practice of physical assessment.

## Specialty Area

Table 8: *Distribution on Responses for Specialty Area*

Specialty area	SA (4)	A (3)	DA (2)	SDA (1)	Mean	SD
The specialty area I work in determines the physical assessment skills I use.	57	134	55	11	2.9	0.79
The physical assessment skills I use are restricted to my specialty area.	67	124	54	12	2.9	0.80
I do not use physical assessment skills outside of my specialty area.	53	108	64	32	2.7	0.76
The physical assessment skills I use are determined by what is acceptable on my ward.	50	147	48	12	2.9	0.79





On “I do not use physical assessment skills outside of my specialty area, “Strongly agree” scored 20.62%, “Agree” scored 42.02%, “Disagree” scored 24.90% and “Strongly disagree” scored 12.45%. The result shows that the respondents accepted this statement as a barrier. The mean score (2.7) suggests that this barrier is moderate with regards to strength.

Responses on “The physical assessment skills I use are determined by what is acceptable on my ward” indicate that 19.45% “Strongly agree”, 57.20% “Agree”, 18.68% “Disagree” and 4.67% “Strongly disagree”. The responses show that respondents agree to the statement as a barrier. A mean score of 2.9 makes this statement a moderate barrier in terms of its strength.

On “I only use physical assessment skills that are relevant to my specialty area”, 23.73% strongly agree, 59.14% agree, 14.02% disagree and 3.11% strongly disagree. The responses for this statement indicate that respondents accepted the statement as a barrier. The result indicates that this statement a moderate barrier with a mean score of 3.0.

In summary, the responses for the statement under specialty area suggest that respondents accepted specialty area as a barrier to their physical assessment practices. The grand mean is 2.9 which suggest that specialty area is a moderate barrier. Though the means for the five statements fall within moderate barriers

## Lack of Nursing Role Models

Table 9: *Distribution on Responses For Lack Of Nursing Role Models*

Lack of Nursing role models	SA	A	DA	SDA	Mean	SD
There is lack of experienced nursing staff to role model physical assessment skills on my ward.	18	156	74	9	2.7	0.76
Nurses encourage one another to use physical assessment on my ward.	1	8	151	97	1.7	0.93
Nurse leaders promote the use of physical assessment skills in my unit.	4	3	160	90	1.7	0.92
Physical assessment skills are role modelled by experienced nurses on my ward.	7	17	152	81	1.8	0.88
I feel supported by my colleagues to perform physical assessment on my patient	10	25	117	105	1.8	0.89
Other nurses do not want to listen when I report my physical assessment findings.	8	38	157	54	2.0	0.82
The information I collect using physical assessment is used to develop a plan of care on my patients.	26	41	175	15	2.3	0.76

*Table 9 continued Distribution on Responses For Lack Of Nursing Role Models*

The information I collect using physical assessment is used to develop a plan of care on my patients.	26	41	175	15	2.3	0.76
My ability to use physical assessment skills makes a Positive difference on patient care.	27	53	174	3	2.4	0.75
My ability to perform physical assessment on my patient improves the quality of nursing care.	6	22	123	106	1.7	0.91

Source: Field Survey, 2016

*Strongly Agree - 4    Agree – 3    Disagree– 2    Strongly Disagree - 1*

*Mean Ranges:*

Grand Mean = 2.9

Average Standard Deviation ± 0.81

As shown by the data presented in Table 11 that out of an aggregate of 2139 responses pertaining to nine indicators on lack of nursing role models, majority 51.85% “Disagree, 26.18% “Strongly disagree”, 16.97% “Agree”, and 5% “Strongly agree”. The result means, majority of the nurses disagree that lack of nursing role models is a barrier to the practice of physical assessment.

The statements under lack of nursing role models have been examined below. On “there is lack of experienced nursing staff to role model physical assessment skills on my ward” 61% of the respondents agree. 29% disagree,

7% strongly agree and 3% strongly disagree. This means, majority agree that there is lack of experienced nursing staff to role model physical assessment skills on their wards. A mean score of 2.7 suggests that this statement is a moderate barrier in terms of its strength.

The statement “nurses encourage one another to use physical assessment on my ward” 59% disagree, whilst 38% and 3% strongly disagree and agree respectively. The result generally suggests that nurses do not encourage one another to use physical assessment on their wards. With a mean score of 1.7, this statement could be considered a very weak barrier in terms of strength.

Also on, “nurse leaders promote the use of physical assessment skills in my unit” 62% and 35% “Disagree” and “Strongly disagree” respectively, whilst 2% “Agree” and 1% “Strongly agree”. This implies nurse leaders do not promote the use of physical assessment skills in their unit. The results show that respondents accept this statement as a barrier. However, it could be considered a very weak barrier based on a mean score of 1.7.

The statement “physical assessment skills are role modeled by experienced nurses on my ward”, 59% and 32% of the respondents “Disagree” and “Strongly disagree” respectively. But 7% and 3% “Agree” and “Strongly disagree” respectively. The result implies, physical assessment skills are not role modeled by experienced nurses on their ward. The responses indicate that this statement was accepted by respondents as a barrier, though a very weak one with a mean of 1.8.

In “I feel supported by my colleagues to perform physical assessment on my patients” statement, majority (46%) of the respondents “Disagree”, while 41% “Strongly disagree”. However, 10% and 4% of the respondents agree and “Strongly agree” respectively. The responses generally suggest that nurses do not feel supported by their colleagues to perform physical assessment on my patients. The results indicate that this statement is a very weak in terms of strength barrier based on a mean score of 1.8.

On “other nurses do not want to listen when I report my physical assessment findings”, majority of the respondents (61%) “Disagree”, 21% “Strongly disagree”, 15% “Agree” and only 3% “Strongly agree”. The responses show that majority of the nurses disagree that other nurses do not want to listen when they report their physical assessment findings. This statement could be considered as a very weak barrier with a mean score of 1.8.

With regards to “the information I collect using physical assessment is used to develop a plan of care on my patients”, 68% of the respondents “Disagree” and 16% “Agree”. But 10% “Strongly agree” and 6% “Strongly disagree”. This means, majority disagree that the information they collect using physical assessment is used to develop a plan of care on their patients. The result shows that this statement is a weak barrier indicated by a mean score of 2.0.

Also, the statement “my ability to use physical assessment skills makes a positive difference on patient care” revealed that, 68% of the respondents “Disagree”. While 21% and 11% “Agree” and “Strongly agree” respectively. The result shows that, the nurses disagree that their ability to use physical

assessment skills makes a positive difference on patient care. However, this statement could be rated as a weak barrier based on a mean score of 2.3

On the statement “my ability to perform physical assessment on my patient improves the quality of nursing care” majority of the respondents (48%) “Disagree” and 41% “Strongly disagree”. However, 9% and 2% of the respondents “Agree” and “Strongly agree” respectively. These responses generally suggest that, nurses disagree that their ability to use physical assessment skills makes a positive difference on patient care, but with a mean score of 2.4, this statement could be rated as weak barrier.

In summary, as indicated by the responses the eight statements under this barrier, majority of the nurses disagree that lack of nursing role models is a barrier to the practice of physical assessment. However, it is a moderate barrier in terms of strength, based on a grand mean of 2.9.

### **Lack of Confidence**

Table 10: *Responses on Lack of Confidence*

Lack of Confidence	SA	A	DA	SDA	Mean	SD
I am sure I can confidently use physical assessment skills.	14	52	189	2	2.3	0.76
I lack confidence in deciding what physical assessment skill to use.	6	198	46	7	2.8	0.77
I worry about my ability to correctly use physical assessment skills.	7	200	44	6	2.8	0.77
I lack confidence in accurately performing physical assessment skills.	12	181	50	8	2.8	0.77

Source Survey Data 201

Grand Mean = 2.7

Grand Standard Deviation  $\pm$  0.75

*Strongly Agree - 4    Agree - 3    Disagree - 2    Strongly Disagree - 1*

As presented in table 13 out of an aggregate of 1285, “Agree” scored 62.96%, “Strongly agree” had 17.82%, “Disagree” scored 17.51% and “Strongly disagree” scored 1.71%.

According to the data presented in Table 10, out of the aggregate of 992 responses provided by respondents to the four statements on “lack of confidence” as a barrier to the practice of physical assessment, 3.93% of respondents indicated “Strongly agree”, while “Agree” was indicated by 60.58% of respondents. “Disagree” scored 33.16%, and “Strongly disagree” scored 2.33%. The results suggest that majority agree that lack of confidence is a barrier to the practice of physical assessment, though a moderate barrier with a grand mean of 2.7. For the individual means for the statements, three fall within moderate barrier (2.6 – 3.0), while one falls within weak barrier (2.1 -2.5). The responses for each of the four statements have been elaborated.

Regarding the statement “I am sure I can confidently use physical assessment skills”, 20% agree, 5% strongly agree, 74% disagree and 1% strongly disagree. These responses suggest that majority agree that they are not sure they can confidently use physical assessment skills. This statement could be rated as a weak barrier in terms of its influence, based on a mean score of 2.3.



On “I lack confidence in deciding what physical assessment skill to use”, majority of the respondents 82% “agree”, but 13% “disagree”, whilst 3% and 2% “strongly disagree” and “strongly agree” respectively. The responses in general, suggest that, nurses agree that they lack confidence in deciding what physical assessment skill to use. A mean score of 2.8 for this statement implies it is a moderate barrier.

Also on, “I worry about my ability to correctly use physical assessment skills”, respondents indicated 78% for “agree”, 17% for “disagree”, 3% for “strongly agree” and 2% for strongly disagree. The result implies, majority agree that they worry about their ability to correctly use physical assessment skills. This statement however, could be rated as a moderate barrier in terms of strength, based on a mean score of 2.8.

The statement “I lack confidence in accurately performing physical assessment skills”, majority of the respondents (70%) indicated “agree” and 5% “strongly disagree”. This implies that nurses lack confidence in accurately performing physical assessment skills. The responses suggest that this statement is a moderate barrier, indicated by a mean score of 2.8.

In summary, majority of the nurses agree that, lack of confidence is a barrier to the practice of physical assessment. However, a grand mean of 2.7 suggests that, this statement is a moderate barrier.

## Lack of Time and Interruptions

Table 11: *Distribution on Responses for Lack of Time and Interruptions*

<b>Lack of time and interruptions</b>	<b>SA</b>	<b>A</b>	<b>DA</b>	<b>SDA</b>	<b>Mean</b>	<b>SD</b>
Too many interruptions during my work prevent me from performing physical assessment on my patient.	20	223	10	4	3.0	0.82
Completing checklists and documentation means I do not have time to use physical assessment skills.	26	153	73	5	2.8	0.77
The physical environment of the ward makes it difficult to perform physical assessment.	114	119	17	7	3.3	0.92
I do not have time to perform physical assessment because of my workload.	25	156	73	3	2.7	0.76
I usually do not have time to do in-depth physical assessment on my patients.	44	158	52	3	2.9	0.80
Lack of time is a barrier to my use of physical assessment skills.	42	160	52	4	2.9	0.80
I do not perform physical assessment because of the task oriented nature of my work.	79	139	29	10	3.1	0.85

**Source Survey Data 2016**



physical assessment. However, a mean score of 3.3 suggests that, this statement is a strong barrier.

Regarding the statement “I do not have time to perform physical assessment because of my workload” the respondents indicated “Agree” by 61%, “Disagree” by 28%, “Strongly agree” by 10%, and “Strongly disagree” by 1%. The results indicate that, majority of the nurses do not have time to perform physical assessment because of their workload. This statement by the responses given, could be rated as a moderate barrier with regards to its influence, based on mean score of 2.7.

The statement “I usually do not have time to do in-depth physical assessment on my patients” 61% indicated “Agree” and 20% of the respondents indicated “Disagree”, whereas 17% and 1% also indicated “Strongly agree” and “Strongly disagree” respectively. The results generally suggest that nurses usually do not have time to do in-depth physical assessment on their patients. A mean score of 2.9 suggests that this statement is a moderate barrier in terms of strength.

On the statement “lack of time is a barrier to my use of physical assessment skills”, 62% of respondents indicated “Agree” and 20% indicated “Disagree”. Whiles 16% of respondents indicated “Strongly agree” and 1% indicated “Strongly disagree”. The result suggests, majority of the nurses agree that lack of time is a barrier to their use of physical assessment skills. However, a mean score of 2.9 suggests that, this statement is a moderate barrier.

Regarding the statement “I do not perform physical assessment because of the task oriented nature of my work” majority (54%) of the respondents indicated “agree”, whilst 31% indicated “Strongly agree” and 11% indicated “Disagree”. Only 4% of the respondents indicated “Strongly disagree”. The responses indicate that this statement is a strong barrier in terms of its influence, based on a mean of 3.1

In summary, the responses on all the statements under this barrier suggest that it is a moderate barrier in terms of its influence, based on a grand mean of 2.9.

### **Lack of Resources/Equipment**

Table 12: *Distribution on responses for lack of resources/equipment*

Lack of resources/equipment	SA	A	DA	SDA	Mean	SD
I do not perform physical assessment because there are no equipment to use.	18	172	62	5	2.8	0.77
I only perform physical assessment when I have access to the required equipment.	5	168	53	31	2.6	0.75
I do not perform physical assessment because resources are not readily available.	164	54	7	32	3.4	0.94

Source: Field Survey, 2016

*Mean Ranges:*

*Strongly Agree - 4    Agree - 3    Disagree - 2    Strongly Disagree - 1*

Grand Mean = 2.6

Grand Standard Deviation  $\pm 0.75$

The data presented in Table 12 unveiled that out of an aggregate of 771 responses pertaining to the three indicators on lack of resources/equipment as a barrier to the practice of physical assessment, “Agree” scored 51.10%, 24.25% Strongly agree, 15.82% Disagree and 8.82% Strongly disagree. The responses for the statements under this barrier are elaborated.

On the statement “I do not perform physical assessment because there are no equipment to use”, 67% of the respondents indicated “Agree” and 24% of the respondents indicated “Disagree”, whilst 7% and 2% indicated “Strongly agree” and “Strongly disagree” respectively. The responses under this statement show that nurses agree they do not perform physical assessment because there are no equipment to use. However, a mean of 2.8 suggest that this barrier is a moderate one in terms of its influence.

On “I only perform physical assessment when I have access to the required equipment” majority of the respondents (85%) indicated “Agree” to the statement, while 21% and 12% indicated “Disagree” and “Strongly disagree” respectively. The responses for this statement suggest that nurses agree that they only perform physical assessment when they have access to the required equipment. With a mean score of 2.6, this statement could be rated as moderate barrier in terms of its strength.

Also, on the statement “I do not perform physical assessment because resources are not readily available”, 64% of the respondents indicated “Strongly agree” and 21% indicated “Agree”, whilst 12% of respondents indicated “Strongly disagree” and 3% indicated “Disagree”. These responses show that majority agree that they do not perform physical assessment because

resources are not readily available. It could be inferred from a mean score of 3.4 that, this statement is a strong barrier with regards to strength.

In summary, majority of the nurses agree that lack of resources/equipment is a barrier to the practice of physical assessment. A grand mean of 2.6 implies that lack of resources/equipment is a moderate barrier in terms of influence.

### **Lack of Ward Culture**

Table 13: *Distribution on Responses for Lack of Ward Culture*

Lack of ward culture	SA	A	DA	SDA	Mean	SD
The ward culture discourages nurses from performing physical assessment in my work place.	60	133	52	12	2.9	0.80
Assessment is done a certain way on my ward which limits the extent of my physical assessment skills use.	78	97	47	35	2.8	0.78
The physical assessment I perform is not valued by my colleagues.	44	163	30	20	2.9	0.79
The ward culture is a barrier to my use of physical assessment practice.	53	155	39	10	2.9	0.81

Source: Field Survey, 2016

*Strongly Agree - 4    Agree – 3    Disagree– 2    Strongly Disagree - 1*

Average Mean = 2.9

Average Standard Deviation ± 0.81

It was revealed by the data presented in Table 13 that out of an aggregate of 1028 responses pertaining to the four indicators on lack of ward culture as a barrier to the practice of physical assessment, “Agree” scored 53.31%,”Strongly agree” scored 22.86%, “Disagree” scored 16.34% and Strongly disagree scored 7.49%.

Regarding responses for the statement “the ward culture discourages nurses from performing physical assessment in my work place” 52% indicated “Agree”, 23% indicated “Strongly agree” and 20% indicated “Disagree”. Only 5% indicated “Strongly disagree”. This means, majority of the respondents agree that the ward culture discourages nurses from performing physical assessment in their work place. This also implies that this statement is a moderate barrier with a mean of 2.9.

On “assessment is done a certain way on my ward which limits the extent of my physical assessment skills use” statement majority of the respondents (38%) “Agree”, 30% and 18% “Strongly agree” and Disagree respectively, and 14% “Strongly disagree”. The result implies, nurses agree that assessment is done a certain way on their ward which limits the extent of their physical assessment skills use. This statement represents a moderate barrier with a mean of 2.8.

Also on the statement “the physical assessment I perform is not valued by my colleagues”, 63% of respondents indicated “Agree” and 17% indicated “Strongly agree”, while 12% indicated “Disagree” and 8% indicated



“Strongly disagree”. These responses suggest, majority of the respondents agree that the physical assessment they perform is not valued by their colleagues. With a mean of 2.9, this statement represents a moderate barrier.

The statement “the ward culture is a barrier to my use of physical assessment practice”, 60% of the respondents indicated “Agree” and 21% “Strongly agree”. Only 15% and 4% indicated “disagree” and “strongly disagree” respectively. The result generally suggests that nurses agree that the ward culture is a barrier to their use of physical assessment practice. This statement also falls within moderate barrier in terms of strength, with a mean of 2.9.

In summary, the nurses agree that lack of ward culture is a barrier to the practice of physical assessment. The grand mean for this barrier is 2.9, which suggests that it is a moderate barrier.

This research also sought to find out if there is any relationship between educational qualification of the nurses and the nurses’ level of knowledge on physical assessment. A spearman’s rho correlation coefficient was run to find out if there is an association between the two variables and if such relationship is significant.

Table 14: *Differences between rank and the frequency of physical assessment practice*

Rank	Sum of Squares	df	Mean Square	F	Sig.
Within groups	1.049	2	.524	1.655	.192
Between groups	149.848	473	.317		

Significant at  $p < .05$

An analysis of variance was carried out to determine if there existed any difference in terms of rank of the nurses and the frequency of physical assessment practice in Table 14. A total of 5 ranks (staff nurse/midwife, senior staff nurse/midwife, nursing officer, senior nursing officer and principal nursing officer) were used for the analysis. The results indicate there is no significant difference between the rank of the nurses and the frequency of physical assessment practice. The F – value ( $F = 1.655, P > .05$ ) obtained were not statistically significant since the p-values of these ranks were greater than 0.05.

### **Discussion of Findings**

A total of 257 respondents answered the questionnaire to identify level of nurses' knowledge on physical assessment, to identify physical assessment practice among nurses in the clinical setting and to identify barriers to physical assessment practices among nurses. On the demographic characteristics of respondents, the findings suggest that majority of the respondents fall within ages 20-30 years' group. Though it was indicated in the review of related literature that age did not have any significant association with practices (Douglas et al, 2014), this survey did not seek for any association between age of respondents and practices. Gender disparity was evident in the findings as only 2% of the respondents were male. This finding is consistent with general trends in previous studies (Yamuachi, 2001; Douglas et al, 2014). Previous studies reported also that there was no statistically significant association between gender and level of knowledge and practices, and this survey did not test for any association between these variables (Douglas et. al, 2014). The findings suggest that majority of the respondents have more than three years of

work experience, but no association between this variable and knowledge and practices were sought for. However, findings from some studies suggest there is no statistically significant association between knowledge and years of work experience (Scobie, 2005; Secrest et al, 2005).

In terms of educational qualification, results from this survey suggest that few of the respondents have acquired a first degree or a master's degree, while majority had basic qualification for professional practice. The researcher did not seek for any correlation between educational qualification and practices. However, report from one study indicated that there was no statistically significant association between educational qualification and physical assessment practices (Douglas et al, 2014). This survey revealed also that, apart from the 19%, the rest of the respondents run all shifts which suggest that, majority (81%) of the respondents have equal chance of practising physical assessment in any of the shifts considered conducive for the task. However, this survey did not identify any correlation between nurses' shift system and their practices, just as in previous surveys. It was also noted that respondents who run only morning shift could be supervisors and nurses who run special clinics such as ante and post – natal, ear, nose and throat, tuberculosis, anti- retroviral therapy, ophthalmic, and family planning services.

The findings also suggest that majority of the respondents are general nurses while the rest of the respondents (44%) have speciality either in critical care, peri-operative, midwifery, Ear/Nose/Throat (ENT) and ophthalmic nursing. It can be inferred from the responses that midwives outnumber the other categories of nurses as the obstetrics/ gynaecology

department constitutes a large number of respondents in the study with 36% of respondents.

On ranks of respondents, findings revealed that 112 (44%) of respondents fall within the rank of staff nurse/midwife which is the start off rank in the nursing hierarchy in Ghana. The study also revealed that majority (63%) of the study population have diploma in nursing which is currently the basic qualification for professional nursing practice in Ghana. It was also indicated by the results that majority of the respondent worked in the obstetrics / gynaecology department. This survey did not seek for any association between department and practices. Also majority of the respondents were general nurses but the influence of specialty on practices was not indicated in this survey. The results suggest that few of the respondents were assigned additional responsibility but none of the previous studies reported on this variable.

The following findings were arrived after analysis of the data in accordance with the objectives of the study and research questions. The study was on knowledge and practice of physical assessment among nurses in the Greater Accra Regional (Ridge) Hospital.

The overall level of knowledge scored 2.8 after computing the grand mean for the responses on all the individual indicators. This suggests that majority of the nurses have good knowledge on physical assessment and can perform with ease majority of the physical assessment indicators listed in the questionnaire. This confirms the assertion by Fennessey and Wittman-Price (2011) and Yamauchi (2001), that nurses have a good knowledge of physical assessment. It was observed from the findings based on mean scores that, most

of the responses on indicators listed in the survey that required observation/inspection such as vital signs, external eyes, nose and oral cavity, consciousness level, response of pupils to light, skin lesion and gait, had high scores for knowledge. This finding is consistent with what has been reported from one of the previous surveys (Shinokazi & Yamauchi, 2007). On the contrary, indicators that required palpation, auscultation and percussion had low scores for “can perform with ease” For instance, palpate abdomen scored (25%), palpate PMI scored (1%), palpating thorax for vocal fremitus (2%), auscultate thorax scored (3%), Percuss thorax (3%), Percuss abdomen scored (4%), and, testing for motor function and range of movement in extremities (9%). These findings confirm the assertion by Yamauchi (2001) that nurses are comfortable performing assessments that require the skill of observation/inspection other than palpation, percussion and auscultation. However, another study reported that nurses performed perceived complex physical assessment skills such as auscultation of the thorax, auscultation of mitral areas, auscultation of the abdomen and percussion of thorax and abdomen (Sony, 1992).

A grand mean of 1.8 was arrived at for frequency of practice. This suggests that respondents have poor practices in term of over - all frequency of practice though some of the indicators had poor score for the frequency of practice where as some had high scores. For instance, vital signs and observing gait scored 72% and 51% respectively for “Always”. These results suggest that the two are the most frequently practiced indicators among all the indicators listed in the questionnaire. This confirms the assertion that some nurses have limited assessment to observation of vital signs and oxygen

saturation (Considine & Botti, 2004; West, 2006). Despite vital signs being the most widely and frequently practiced indicators, 22% of respondents indicated “Always” and 5% for “Sometimes” in terms of frequency for practice. It could also be inferred from the results of the study that majority of the respondents do not practise most of the physical assessment indicators frequently as expected. This finding corroborates with findings reported from a previous study (Lesa & Dixon, 2007). The findings from this survey showed that some of the indicators such as palpate for PMI (95%), palpate thorax for vocal fremitus (94%), percuss thorax for breath sounds (91%), auscultate for heart murmurs (84%), auscultate for bowel sounds (86%), percuss abdomen (87%) and testing deep tendon reflexes (89%) had high scores for “not at all” which suggest that nurses do not practice these assessment indicators. This could be attributed to the fact that these indicators require skills with some level of competency to perform. These findings corroborate with what has been reported from one of the previous surveys, (Neville et al, 2006). It could be inferred also from the results that nurses who have specialized in ophthalmic nursing accounted for the 5%, 2% and 4% for “examining external eyes”, “evaluating extra-ocular movement” and “testing for response of pupils of the eye” respectively as responses for “Always”. Similarly, the 2% responses for “Always” on examining nose and oral cavity, could account for nurses who have specialized in ENT nursing which suggest that in this case specialty has influence on practices with respect to certain body systems. The result suggests that assessment of ear, nose and throat were rarely performed (Giddens, 2007). The results of this survey suggest that nurses use few of the

many physical assessment skills taught in nursing education. This finding conforms to what was indicated in previous study (Schroyen et al, 2005).

Despite obstetrics/gynaecology department forming the largest number of the study population, “Always” and “Often” scored 21% and 16% respectively for palpation of the abdomen. This suggests that not all midwives perform palpation of the abdomen though it is one of the routine assessments peculiar to obstetrics/gynaecology department. This finding also give credence to the findings in previous studies which indicated that not all nurses in the respiratory unit performed auscultation of the chest as a ward culture. This buttresses the assertion that specialty did not have a direct association with practices (west, 2006).

The study also revealed that among the seven barriers listed in this survey, respondents agreed on five based on grand mean scores as being influential to the practice of physical assessment. Thus majority of the nurses agree that their specialty area (2.9), lack of confidence (2.7), lack of time and interruptions (2.6), lack of resources/equipment (2.6), and lack of ward culture (2.9) are barriers to the practice of physical assessment giving credence to findings reported from previous studies, (Shin et al. 2009; Douglas et al, 2014). The findings suggest that specialty area influenced the use of physical assessment indicators relevant to their area of practice, which supports the assertion by Scobie (2005). The results also showed that support from colleagues and nurse role models were factors that influence nurses’ use of physical assessment skills, thus confirming the assertion by Douglas et al (2014). However, the mean scores for the barriers in this survey is quite similar to what was indicated by a previous study (Douglas et al, 2014) which

are as follows: reliance on others and technology (2.21), lack of time and interruptions (2.69), lack of confidence (2.45), lack of nursing role model (2.63), lack of ward culture (2.26) and specialty area (3.48). Although five of the barriers were accepted by respondents as applicable to their setting, the mean scores for the five barriers fall within the moderate barrier category (2.5-2.9). Though this survey did not indicate any significant association between the barriers and demographic variables, one study reported that there was no correlation between perceived barriers to physical assessment practices and demographic variables such as age, gender, and educational qualification (Douglas et. al, 2014). This suggests that these barriers could be overcome by the respondents through effective implementation of recommendations.

The study also disclosed that the nurses disagree that lack of nursing role models and reliance on others and technology, are barriers to the practice of physical assessment. This finding confirms the claim by Giddens (2007). The respondents perceived that two of the barriers fall within weak categories of barriers.

The survey also sought to determine whether there is any significant association between some of the demographic variables and knowledge of respondents as well as practices using the variances in mean scores. A Spearman's Rank correlation coefficient of 0.289 indicates a weak positive association between educational qualification of nurses and their level of knowledge on physical assessment. This implies that, the higher the level of education of the nursing personnel, the higher his or her knowledge in physical assessment. The association is significant at the 0.05 alpha level ( $p < 0.001$ ). This finding from this survey is contrary to the findings by



(Scobie, 2005), which indicated that there is no correlation between higher qualification and knowledge on physical assessment.

The study revealed that there was no difference of statistical significance between level of knowledge and educational qualification, years of work experience. This conforms to the findings that there is no correlation between attainment of degree and performance of physical assessment (Scobie, 2005). Similarly, there was no statistically significant association between performance of physical assessment practice and level of knowledge, and years of work experience, shift system, contrary to the findings that, nurses with more years of experience could perform most of the physical assessment indicators including those that require palpation, auscultation and percussion (Yamauchi, 2001).

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### **Introduction**

This chapter presents the summary and conclusions, and recommendations of the research. The summary highlights the salient findings per the specific objectives and conclusions made based on findings of the study. Recommendations were also drawn based on the summary of the findings.

#### **Summary and Conclusion**

This study has been based on knowledge and practice of skills for physical assessment of patients by nurses in the Greater Accra Regional (Ridge) Hospital. The objectives of the study were to identify level of nurses' knowledge on physical assessment, the frequency of physical assessment practice among nurses in the clinical setting and barriers to physical assessment practice among nurses.

The study follows a descriptive research design. Primary data for analysis was gathered using a questionnaire survey. In order to accomplish the needed results, the researcher used convenience sampling techniques to sample 257 nurses/midwives in the Greater Accra Regional (Ridge) Hospital who answered the questionnaires. The quantitative and qualitatively data collected was analysed using the Statistical Product and Service Solutions (SPSS 22) computer application software to run basic descriptive statistics such as frequencies, percentages, means and standard deviations of the main variables of investigation.

With the objectives of the study for this research as a focal point, the researcher was able to come out with findings based on the research problems. In addition to the main objectives, other relevant issues concerning knowledge and practice of physical assessment among nurses were discovered. The summaries of the findings are elaborated below.

The study showed that nurses have a good knowledge in physical assessment with an overall mean score of 2.8, as respondents indicated that, they can perform with ease some of the indicators of physical assessment.

It also revealed that the respondents do not practise majority of the physical assessment issue sought because the result of the survey indicated that only few of the assessment indicators were practiced “always” or “often” while majority were practiced “sometimes” or “not at all”, especially those that fall under palpation, percussion and auscultation.

On barriers to the practice of physical assessment, the study also revealed that there are seven barriers but the respondents accepted five as being influential to physical assessment practices, whereas the remaining two barriers were less influential to the practice of physical assessment, based on the ratings of the barriers. The five accepted barriers to the practice of physical assessment of the nurses are specialty area, lack of confidence, lack of time and interruptions, lack of resources/equipment, and lack of ward culture, all of which are moderate barriers. The respondents did not perceive these other two (reliance on others and technology and lack of nursing role) barriers to be influential to their physical assessment practices.

The literatures suggest that nurses can have a prominent role in end-of-life care. Hence, it is important to assess nurses' knowledge and practice of physical assessment. The result of this study suggests that the majority of respondents are knowledgeable on physical assessment that could be performed with ease physical assessment. However, majority of the nurses do not perform physical assessment as a routine. On barriers to the practice of physical assessment, majority of the nurses agree that their specialty area, lack of confidence, lack of time and interruptions, lack of resources/equipment, and lack of ward culture are barriers to the practice of physical assessment. But reliance on others and technology and lack of nursing role models are not barriers to the practice of physical assessment.

### **Key findings**

The summaries of the findings are therefore elaborated below.

1. The study showed that nurses are knowledgeable in physical assessment, and have the skills to perform them with ease.
2. The study also revealed that physical assessment practices of the nurses used in the survey are acceptable.
3. On barriers to the practice of physical assessment, the study disclosed that the respondents perceived specialty area, lack of confidence, lack of time and interruptions, lack of resources/equipment, and lack of ward culture as barriers. However reliance on others and technology, and lack of nursing role models were not perceived as barriers to physical assessment practice.
4. The study revealed that there is a positive correlation between the educational qualification of nurses and their knowledge on physical

assessment, which implies that the higher the qualification, the better the knowledge on physical assessment.

5. The study also brought to light that, there is no statistically significant difference between professional rank of nurses and the frequency of physical assessment practices.

### **Conclusions**

The literatures suggest that nurses can have a prominent role in end-of-life care. Hence it is important to assess nurses' knowledge and practice of physical assessment. The result of this study suggested that the majority of respondents are knowledgeable in physical assessment, have the physical assessment skills and can perform with ease physical assessment. However, majority of the nurses do not practise the physical assessment practice. On barriers to the practice of physical assessment, majority of the nurses agree that their specialty area, lack of confidence, lack of time and interruptions, lack of resources/equipment, and lack of ward culture are barriers to the practice of physical assessment. But reliance on others and technology and lack of nursing role models are not perceived as barriers to the practice of physical assessment.

Therefore, in conclusion although there are barriers to the practice of physical assessment, nurses should focus on its importance and make it a daily practice.

## **Recommendations**

From the questionnaire administered and data analysed as well as a careful scrutiny of the findings, the researcher puts forward the following recommendations:

A continuous extensive training program should be organized and executed by the health policy makers and health service institutions to train nurses to maintain ward culture and boost nurses' confidence to enhance the practice of physical assessment.

A joint effort between nursing management and the hospital administration to use senior nurses with expertise in physical assessment to role model junior colleagues to build their capacity in physical assessment practice to enhance utilisation of the nursing process in the care of patients.

Refresher programs or workshops on time management would help reduce the lack of time and interruptions faced by nurses and increase the level of performance to improve quality of nursing care.

Management should also make sure resources/equipment are provided and improved to augment the practice of physical assessment.

## **Recommendations for further studies**

This study was an exploratory and descriptive one to evaluate the knowledge and practice of physical assessment among nurses in the Greater Accra Regional (Ridge) Hospital. At the end of this study, the researcher finds the need to recommend for further studies that will address the following:

1. Assessment of determinants of physical assessment practices among nurses.
2. Evaluation of nursing assessment of patient in acute medical wards.

### 3. Factors influencing good assessment practices among nurses.

#### **Implication for Nursing Practice**

Despite having a reasonably good knowledge of physical assessment, nurses/ midwives at the Greater Accra Regional Hospital do not practice most of the physical assessment indicators frequently as expected by professional standards for practice. This suggests that, the nurses/midwives put their patient at risk of clinical deterioration which could have been prevented or promptly intervened through adequate and frequent physical assessment. Therefore, continuous educational programs on physical assessment skills would be necessary to increase nurses' knowledge of physical assessment to enable them to use physical assessment skills more frequently and with less difficulty. Nurses/midwives should shift from the tradition of only assessing vital signs to more advanced and comprehensive assessment. Until all registered nurses/midwives as well as regulatory bodies of the profession make conscious effort to incorporate comprehensive physical assessment into daily practice, the struggle with sustainability of the use of the nursing process in our local context (Ghana) to meet internal standards will not end soon

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## Appendix I

### University of Cape Coast

#### Questionnaires

This questionnaire forms part of a research to determine knowledge and practice of physical assessment among nurses. Whatever information provided will be treated as confidential.

**Instructions:** Please indicate your response with a tick (✓) using blue or black ink.

#### Section A: Demographic data and other

1. Age
  - 20-30 [ ]
  - 31-40 [ ]
  - 41-50 [ ]
  - 51-60 [ ]
2. Gender
  - Male [ ]
  - Female [ ]
3. Present rank
  - Staff nurse/midwife [ ]
  - Senior staff nurses/midwife [ ]
  - Nursing officer [ ]
  - Senior nursing officer [ ]
  - Principal nursing officer [ ]

4. Highest educational/ professional qualification

- State registered nurse certificate [ ]
- Diploma [ ]
- Post diploma [ ]
- Degree [ ]
- Postgraduate/Masters [ ]

5. Present department

- Internal medicine [ ]
- Surgery [ ]
- Paediatric [ ]
- Obstetrics/gynaecology [ ]

6. Years of working experience

- < 3 years [ ]
- 3- 5 years [ ]
- 6- 9 years [ ]
- $\geq$  10 years [ ]

7. Type of duties

- Light duties [ ]
- General duties [ ]
- Special duties [ ]

8. Shift systems

- Morning shifts only [ ]
- Afternoon shifts only [ ]
- Night shifts only [ ]
- All shifts [ ]

9. Additional responsibility

- Always [ ]
- Sometimes [ ]
- Not at all [ ]

**Section B: Knowledge on physical assessment**

Key: 4- Can perform with ease      3- Able to perform but with some difficulty

2- Need assistance to perform      1- Cannot perform at all

No.	Physical assessment skills	Ratings			
		4	3	2	1
10	Assessing vital signs (blood pressure, temperature, respiratory rate, pulse rate) and oxygen saturation				
11	Assessing consciousness level				
12	Testing for skin turgor				
13	Examining for skin lesions				
14	Testing for pitting edema				
15	Examining external eyes				
16	Evaluating extraocular movements				
17	Testing for response of pupils of the eyes				
18	Examining nose and oral cavity				
19	Palpating lymph nodes of the neck				
20	Assessing carotid pulses				
21	Assessing for jugular venous pressure				

	(JVP)				
22	Palpating thorax for vocal fremitus				
23	Percussing the thorax				
24	Auscultating the lungs for breathing sounds				
25	Palpating the precordium for point of maximal impulse (PMI)				
26	Auscultating the heart for murmurs				
27	Palpating for breast lumps				
28	Palpating for axillary nodes				
29	Auscultating for bowel sounds				
30	Percussing the abdomen				
31	Palpating the abdomen				
32	Testing for motor function and range of movement in any of the extremities				
33	Observing gait				
34	Assessing coordination				
35	Testing deep tendon reflexes				



### Section C: Frequency of physical assessment practice

Key: 4- Always      3- Often      2- Sometimes      1-

Not at all

	Physical assessment skill	Ratings			
		4	3	2	1
36	Assessing vital signs (blood pressure, temperature, respiratory rate, pulse rate) and oxygen saturation				
37	Assessing consciousness level				
38	Testing for skin turgor				
39	Examining for skin lesions				
40	Testing for pitting edema				
41	Examining external eyes				
42	Evaluating extra ocular movements				
43	Testing for response of pupils of the eyes				
44	Examining nose and oral cavity				
45	Palpating lymph nodes of the neck				
46	Assessing carotid pulses				
47	Assessing for jugular venous pressure (JVP)				
48	Palpating thorax for vocal fremitus				
49	Percussing the thorax				
50	Auscultating the lungs for breathing sounds				

51	Palpating the precordium for point of maximal impulse (PMI)				
52	Auscultating the heart for murmurs				
53	Palpating for breast lumps				
54	Palpating for axillary nodes				
55	Auscultating for bowel sounds				
56	Percussing the abdomen				
57	Palpating the abdomen				
58	Testing for motor function and range of movement in any of the extremities				
59	Observing gait				
60	Assessing coordination				
61	Testing deep tendon reflexes				

**Section D: Barriers to the practice of physical assessment**

Key: 4- Strongly agree 3- Agree 2- Disagree 1- Strongly disagree

No.	Barriers to physical assessment practice	Ratings			
	<b>Reliance on others and technology</b>	4	3	2	1
62	Physical assessment is the responsibility of medical or allied health staff.				
63	I tend to rely on monitoring equipment to collect assessment data on patients.				

64	I see physical assessment as something only doctors do.				
65	Nurses do not need physical assessment to do their work well.				
66	Use of technology reduces the need for nurses' physical assessment practice.				
67	I can gather all the physical assessment data I need using electronic monitoring devices.				
<b>Specialty area</b>					
68	The specialty area I work in determines the physical assessment skills I use.				
69	The physical assessment skills I use are restricted to my specialty area.				
70	I do not use physical assessment skills outside of my specialty area.				
71	The physical assessment skills I use are determined by what is acceptable on my ward.				
72	I only use physical assessment skills that are relevant to my specialty area.				
<b>Lack of Nursing role models</b>					
73	There is lack of experienced nursing staff to role model physical assessment skills on my ward.				

74	Nurses encourage one another to use physical assessment on my ward.				
75	Nurse leaders promote the use of physical assessment skills in my unit.				
76	Physical assessment skills are role modelled by experienced nurses on my ward.				
77	I feel supported by my colleagues to perform physical assessment on my patients.				
78	Other nurses do not want to listen when I report my physical assessment findings.				
79	The information I collect using physical assessment is used to develop a plan of care on my patients.				
80	My ability to use physical assessment skills makes a Positive difference on patient care.				
81	My ability to perform physical assessment on my patient improves the quality of nursing care.				
<b>Lack of confidence</b>					
82	I am sure I can confidently use physical assessment skills.				
83	I lack confidence in deciding what physical assessment skill to use.				
84	I worry about my ability to correctly use				

	physical assessment skills.				
85	I lack confidence in accurately performing physical assessment skills.				
<b>Lack of time and interruptions</b>					
86	Too many interruptions during my work prevent me from performing physical assessment on my patient.				
87	Completing checklists and documentation means I do not have time to use physical assessment skills.				
88	The physical environment of the ward makes it difficult to perform physical assessment.				
89	I do not have time to perform physical assessment because of my workload.				
90	I usually do not have time to do in-depth physical assessment on my patients.				
91	Lack of time is a barrier to my use of physical assessment skills.				
92	I do not perform physical assessment because of the task oriented nature of my work.				
<b>Lack of resources/equipment</b>					
93	I do not perform physical assessment because there are no equipment to use.				

94	I only perform physical assessment when I have access to the required equipment.				
95	I do not perform physical assessment because resources are not readily available.				
<b>Lack of ward culture</b>					
96	The ward culture discourages nurses from performing physical assessment in my work place.				
97	Assessment is done a certain way on my ward which limits the extent of my physical assessment skills use.				
98	The physical assessment I perform is not valued by my colleagues.				
99	The ward culture is a barrier to my use of physical assessment practice.				

**APPENDIX II**  
**UNIVERSITY OF CAPE COAST**  
**INSTITUTIONAL REVIEW BOARD**  
**INFORMED CONSENT FORM**

Title: Knowledge and Practice of Physical Assessment among Nurses in the  
Greater Accra Regional (Ridge) Hospital

Principal Investigator: Sarah Ghanney

Address: University of Cape Coast,  
College of Health and Allied Sciences  
School of Nursing and Midwifery

**General Information about Research**

The purpose of this research is to identify the gap in knowledge and practice of physical assessment among nurses to enable nurses make the needed effort to incorporate physical assessment in everyday practice to improve on the quality of nursing practice. This study seeks to assess nurses' level of knowledge of physical assessment, frequency of practice of certain physical assessment items and barriers to practice of physical assessment. Participants will be required to complete a questionnaire given out by the researcher. Participants may require about 25-30 minutes to complete the questionnaire. Possible responses are provided on the questionnaire for participants to choose from. The researcher will be available for any explanation regarding the research and may be contacted on 0244607521. Participants will be required to sign a consent form as

proof of consent to participate in the research. Information provided by participants will be analysed and the findings published in health magazines for the benefit of all stake holders. The entire duration for administering and collecting the questionnaire is one month.

### **Procedures**

To find answers to some of these questions, we invite you to take part in this research project. If you accept, you will be required to fill out a survey which will be provided and collected by Sarah Ghanney.

You have been asked to take part because the researcher thinks as a provider of health services your response would be helpful to the study.

The questions in the research are related to physical assessment. No embarrassing questions are included in this research.

If you do not wish to answer any of the questions included in the survey, you may skip them and move on to the next question. [Describe how the survey will be distributed and collected]. The information recorded is considered confidential, and no one else except Sarah Ghanney will have access to your survey.

The expected duration of the survey is 25-30 minutes.

### **Possible Risks and Discomforts**

No possible physical or psychological risks and discomforts are anticipated in this research.

### **Possible Benefits**

Findings from this research is expected to inform nurses on the state of physical assessment practice enable them put in the needed effort on their practice to improve quality of care to clients.



**Alternatives to Participation**

Not applicable

**Confidentiality**

All information will be treated as confidential and only the researcher will have access to it. Your name is not required in the responses to be provided. Also, you will not be mentioned in any report related to this research.

**Compensation**

Not applicable

**Additional Cost**

Not applicable

**Staying in the Research**

Not applicable

**Voluntary Participation and Right to Leave the Research**

Participation in this research is voluntary. If at any point you have a change of mind and want to withdraw from the research, you can do so without reprisal.

**Termination of Participation by the Researcher**

Not applicable

**Notification of Significant New Findings**

Not applicable

**Contacts for Additional Information**

For further explanations about the research, please contact Sarah Ghanney on 0244607521/0202572954 or Dr. Mate Siakwa on 0509181687

**Your rights as a Participant**

This research has been reviewed and approved by the Institutional Review Board of University of Cape Coast (UCCIRB). If you have any questions about your

rights as a research participant, you can contact the Administrator at the IRB Office between the hours of 8:00 am and 4:30 p.m. through the phones lines 0332133172 and 0244207814 or email address: [irb@ucc.edu.gh](mailto:irb@ucc.edu.gh).

## VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title (*name of research*) has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

---

Date \_\_\_\_\_ Name and signature or mark of volunteer \_\_\_\_\_

**If volunteers cannot read the form themselves, a witness must sign here:**

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

---

Date \_\_\_\_\_ Name and signature of witness \_\_\_\_\_

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

---

Date \_\_\_\_\_ Name Signature of Person Who Obtained Consent \_\_\_\_\_

APPENDIX III

UNIVERSITY OF CAPE COAST

INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 03321-33172/3 / 0207355653/ 0244207814

C/O Directorate of Research, Innovation and Consultancy

E-MAIL: irb@ucc.edu.gh

OUR REF: UCC/IRB/A/10

YOUR REF:



1<sup>ST</sup> JUNE, 2016

Mrs. Sarah Ghanney  
School of Nursing and Midwifery  
University Cape Coast

Dear Mrs. Ghanney,

**ETHICAL CLEARANCE –ID NO: (UCCIRB/CHAS/2016/02)**

The University of Cape Coast Institutional Review Board (UCCIRB) has granted **Provisional Approval** for implementation of your research protocol titled: **“Knowledge and Practice of Physical Assessment among Nurses in the Greater Accra Regional (Ridge) Hospital: Implication for Nursing Practice.”**

This approval requires that you submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research. The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

Please note that any modification of the project must be submitted to the UCCIRB for review and approval before its implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours faithfully,

  
for: (Samuel Asiedu Owusu)  
ADMINISTRATOR

cc: The Chairman, UCCIRB

.....  
ADMINISTRATOR  
INSTITUTIONAL REVIEW BOARD  
UNIVERSITY OF CAPE COAST  
Date: 1-6-16.....

APPENDIX IV



UNIVERSITY OF CAPE COAST  
COLLEGE OF HEALTH AND ALLIED SCIENCES  
SCHOOL OF NURSING AND MIDWIFERY  
DEAN'S OFFICE



Telephone: 233-3321-33342/33372  
Telegame & Cable: University, Cape Coast  
Email: nursing@ucc.edu.gh

UNIVERSITY POST OFFICE  
CAPE COAST, GHANA.

Our Ref: SN/77/Vol.2/  
Your Ref:

22<sup>nd</sup> February, 2016

The Director  
Greater Accra Regional Hospital  
Post Office Box 473  
Greater Accra

Dear Sir,

**LETTER OF INTRODUCTION: MS. SARAH GHANNEY**

The above named person is a level 850 student of the School of Nursing and Midwifery, University of Cape Coast with ID Number **BS/MNS/14/0004**.

**Ms. Ghanney** is in her final year, pursuing a Master of Nursing. She is conducting a research on the topic: **"Knowledge and Practice of Physical Assessment among Nurses in the Greater Accra Regional Hospital" (RIDGE)**.

We would be very grateful if you could offer her the necessary assistance and support.

Thank you.

Yours faithfully,

  
Dr. Samuel Victor Nu'vor  
VICE-DEAN

SCHOOL OF NURSING  
UNIVERSITY OF CAPE COAST  
CAPE COAST

APPENDIX V

*In case of reply the  
number and date of this  
Letter should be quoted.*

*My Ref No GAR ADMN 2/15  
Your Ref. No.*



Ghana Health Service  
Greater Accra Regional Health  
Directorate  
P O Box 184  
Accra.

FEBRUARY 29, 2016

Tel.  
302 - 234225

THE MEDICAL DIRECTOR  
RIDGE REGIONAL HOSPITAL  
GHANA HEALTH SERVICE  
ACCRA



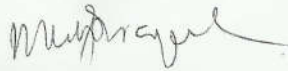
**INTRODUCTORY LETTER - MS SARAH GHANNEY**  
**MASTER OF NURSING**

This serves to introduce to you the above named student from the University of Cape Coast, who has been granted permission to carry out a research in your facility. Her research topic is "KNOWLEDGE AND PRACTICE OF PHYSICAL ASSESSMENT AMONG NURSES".

Attached is an introductory letter from the University for your Perusal.

Please give her the necessary support.

Thank you.



MR PETER MENSAH  
DEPUTY DIRECTOR, ADMINISTRATION  
FOR: REGIONAL DIRECTOR OF HEALTH SERVICES  
GREATER ACCRA