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**The Application of Nursing Process in Pediatric  
Departments at Governmental Hospitals in the Gaza  
Strip: Influencing Factors and Obstacles**

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Departments at Governmental Hospitals in the Gaza  
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**Thesis Approval**


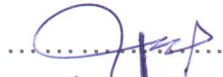
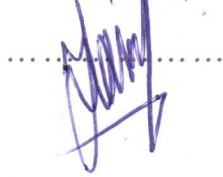
**The Application of Nursing Process in Pediatric Departments at  
Governmental Hospitals in the Gaza Strip: Influencing  
Factors and Obstacles**

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## **Dedication**

This Thesis is dedicated to my parents and my husband who did everything easy for me, they are a model of great strength and love and praying for me every time. They granted me support, encouragement, and love made this endeavor possible

## **Declaration**

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

## **Signed**

**Walaa Fathi Abu Mousa**

**Date: / / 2018**

## **Acknowledgment**

I highly express my appreciation to all people who gave me assistance in one way or the other in my master thesis. I highly appreciate my supervisors Dr. Samer Alnawajha and Dr Osama Elian for their continued guidance and support. I also acknowledge the support given by all lecturers at AlQuds University, faculty of health professions, nursing department for their teaching and mentorship. Finally I appreciate my classmates and more so my group members for their support and encouragement.

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## **Abstract**

Nursing process is a global concept, which forms the foundation of nursing as profession. The use of nursing process in most hospitals is lagging behind despite all the effort of nursing professionals to implement its use. This study aimed to assess the obstacles that impede, and the influencing factors which promote the application of nursing process in paediatric departments at Governmental Hospitals in the Gaza Strip. The study adopted cross-sectional design on a census sample of 184 nurses who are working in the pediatric departments at governmental hospitals in the Gaza Strip. The researcher used a questionnaire as a tool for data collection. Different statistical procedures were used for data analysis including percentages, mean, independent sample t test, One-way ANOVA, and Pearson correlation. The study results revealed that the mean percentage of nurses' attitude and knowledge toward the application of nursing process is 66.71% and 65.81 respectively. Also, there are no significant differences in the level of attitude regarding nursing process with regard to nurses' gender, educational levels, workplace (hospital). While the significant difference was noted in the mean of attitude with regard to the age groups of nurses and their level of income. The study results revealed also that there are no significant differences in the level of nurses' knowledge with regard to their demographic factors. More importantly, there is a weak significant correlation between the level of nurses' attitude and perception toward the application of nursing process, and their knowledge of nursing process. Additionally, the first influencing factor which may facilitates the application of nursing process include "recognition of nursing process by the hospital administration as a framework of nursing care delivery", and the first obstacle which may impede the application of nursing process is that "the hospital management does not providing necessary facilities for doing the nursing process by the authorities". The study concluded that the nurses' attitude and knowledge regarding nursing process is not satisfactory. The researcher recommends conducting special workshops with key persons at the ministry of health and nursing unit to activate the application of nursing process in the paediatric departments as a pilot. Also, conducting training regarding nursing process among all nurses and the head nurses through continuous in-service education, and on job training and mentorship programs are highly recommended. Hospitals' management should recognize the nursing process as a framework of nursing care delivery, hospitals should also reinforce the mechanisms to ensure availability of resources needed to implement the nursing process such as supplies, necessary facilities, and nursing process forms.

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## **List of Abbreviations**

EGH	European Gaza Hospital
MoH	Ministry of Health
NGOs	Non-Governmental Organizations
NP	Nursing Process
PARIHS	Promotion Action on Research Implementation in Health Services Framework
PCBS	Palestinian Centre Bureau of Statistics
PHCC	Primary Health Care Centers
SNCPs	Standardized Nursing Care Plan
UK	United Kingdom
USA	United States
WB	West Bank
WHO	World Health Organization

# **Chapter One**

## **Introduction**

### **1.1 Background of the study**

The nursing process is a series of critical thinking activities that are used by nurses as they care for their patients (Yeboah et al., 2017). These activities define a nursing model of care, differentiating nursing from other helping professions (Grace et al., 2017). The nursing process consists of interconnected steps; and it is an organized and self-motivated way of giving nursing care to patients. encourages humanistic, outcome-focused, cost-effective care; and it is based on the belief that, as we plan and convey care, we must also consider the exceptional values, concerns, and desires of the consumer, who may be an individual, a family, or a community (Yeboah et al., 2017).

The nursing process was initially an adapted form of problem solving technique based on theory used by nurses every day to help patients improve their health and assist doctors in treating patients. Its primary aim is to identify the health status and the problems of clients which may be actual or potential (Adeyemo and Olaogun, 2013). The nursing process is considered the appropriate method to explain the nursing essence, its scientific bases, technologies, and humanist assumptions that encourage critical thinking and creativity and permits solving problems in professional practice. This method represents an attempt to evidence and understand nursing work focused on care as a reflective practice (Yeboah et al., 2017).

Nursing process guides the sequence of clinical reasoning and improves the quality of care. It integrates, organizes, and ensures the continuity of information, enabling nursing staff to evaluate their efficiency and effectiveness and to modify their performance according to

patient recovery results (Sasso, et al., 2013). Consequently, this underpins the need for the effective implementation of the nursing process in patients care (Afoi et al., 2012). Moreover, nursing process has been used as a problem-solving activity in nurses' plan of care and further as the foundation for professional practice in everyday nursing practice (Yildirim and Ozkahraman, 2011).

Moreover, there is strong need to apply the nursing process in the governmental hospitals, which produce an improvement of the quality of patient care (Hagos et al., 2014). Recognizing barriers in accomplishment of the nursing process in pediatric departments at the governmental hospitals in the Gaza Strip is importantly needed. So, the main aim of this study is to assess the obstacles that impede, and the influencing factors which promote the application of nursing process in pediatric departments at Governmental Hospitals in the Gaza Strip, thus the outcome of this study can be meaningful and would be helpful in investigating the current barriers regarding the implementation of it to be easily implemented.

## **1.2 Research problem**

However, the nursing process is very important to provide nursing care with high quality, many nurses in governmental hospitals do not apply it in their practice, so, the researcher had observed with great concern that most of paediatric patients did not have nursing process or nursing care plan in paediatric departments and other departments. More importantly, the nurse will not be able to prioritize the paediatric patients' needs without the application of nursing process, thus will lead to deterioration in the child health status.

On the other hand, all of nurses in the governmental hospitals in the Gaza Strip have studied the nursing process in their academic period, but they are not practicing it right time. Many nurses felt that the nursing process is meant to teach students during clinical

training only. Based on previous studies, nurses with greater levels of expertise are less likely to use the nursing process as a complete system for nursing care, they are relying more on experienced clinical judgments which might also worsen the problem (Hagos et al., 2014).

Furthermore, the application of nursing process in governmental hospitals in the Gaza Strip has not been taken into consideration, all nurses in the hospitals rely on their documentation of nursing notes which lacks to the important five steps of nursing process, they rely mainly on their clinical experience and judgement, as of the researcher's experience in pediatric ward; nursing notes and the nurses' documentation is lacking in terms of basic and advanced patient health needs. Also, nursing notes alone cannot adopt the process of pediatric patient monitoring during the nurse work shift. Moreover, the planning and evaluation phase which are considered as fundamental steps in the nursing process; are not present within nursing notes.

Additionally, since the narrative charting is used in the governmental hospital in the Gaza Strip, thus the pediatric patient would have mild to severe complications due to this problem and lack of pediatric patient evaluation after nursing intervention as well, meanwhile, there are barriers to apply the nursing process either managerial, individual or institutional barriers; so, recognizing these barriers in application of it in the pediatric departments is needed, thus this study will identify the barriers in implementation of the nursing process.

The absence of application of nursing process in the pediatric departments and other departments will make the nurses unaware of needed action for the pediatric patient based on nursing diagnosis and the needed evaluation which are consider from the main elements of nursing process, without application of the nursing process; the pediatric patient may be

at risk due to absence of good and complete continuous patient monitoring in the department, thus the nurse will be at risk for legal accountability. Moreover, the application of nursing process in the governmental hospitals requires understanding of its application influencing factors and obstacles; the issues which were not known till now in the governmental hospitals in the Gaza Strip, thus an effective action in future to apply it smoothly might be taken based on these barriers.

### **1.3 Justification of the study**

Nursing quality is closely related to a healthcare system's effectiveness. In order to achieve quality of health care service; quality of nursing care is the key element and to fill this demand application of the nursing process has a significant role, but, in practice, application of the nursing process is not well developed especially in governmental hospitals in the Gaza Strip. This study is the first one to be conducted in the Gaza Strip which considers this issue as an important one, this study will produce stimulating results for nurses, nursing managers and policy makers in the ministry of health (MoH) to apply the most important missing link in nursing care which is the "nursing process" since its effective implementation leads to improved quality of care and stimulates the construction of theoretical and scientific knowledge based on the best clinical practice.

The quality of nursing care is not completely understood and is not completely measured effectively in the hospitals in the Gaza Strip, we cannot judge the quality of nursing care without pre-application of the nursing process and nursing care plan especially in pediatric departments. Moreover, since the health of pediatric patients is very sensitive, they also require complete and continuous observation; there is a need to apply the nursing process in pediatric departments which will monitor the child closely and take every change in the child health in consider. More importantly, to improve the quality of nursing care, the basic

step is application and implementation of the nursing process; it might enable the nurses to fulfil scientific methodology and autonomy as a profession.

Moreover, conducting like this study concerning the application of nursing process in the Gaza Strip and its related obstacles is necessary, this study will identify knowledge and skill gap in nursing care. The result of this study might contribute significantly some importance guide for policy makers at the ministry of health regarding application of nursing process; thus will have a positive outcome in quality of nursing care provided to the paediatric patients in the hospitals. Furthermore, the result of this study in paediatric departments can be used as a baseline data for further related studies in other hospitals departments. Also, the application of nursing process will lead to positive patient outcome and might increase patient satisfaction in our hospitals. Assessing obstacles related to the application of nursing process might be considered as a key for all policy makers in the ministry of health to address the gaps and ensure good utilization of nursing process which in turn will lead to improvement in the quality of nursing care to the patients in the governmental hospitals in the Gaza Strip.

#### **1.4 Main aim of the study**

The main aim of this study is to assess the influencing factors which promote, and the obstacles that impede the application of nursing process in paediatric departments at Governmental Hospitals in the Gaza Strip

### **1.5 Objectives of the study**

1. To assess the nurses' attitude toward the implementation of nursing process in the paediatric departments at Governmental Hospitals in the Gaza Strip.
2. To identify the institutional factors which interfere with the implementation of nursing process in paediatric departments at Governmental Hospitals in the Gaza Strip.
3. To determine the nurses' knowledge regarding the implementation of nursing process in paediatric departments at Governmental Hospitals in the Gaza Strip.
4. To identify the differences in the nurses' knowledge and attitudes toward the application of nursing process in paediatric departments with regard to demographic characteristics of the nurses.
5. To set recommendations for the policy makers in the ministry of health to implement the nursing process at governmental hospitals in the Gaza Strip.

### **1.6 Research questions**

1. What is the level of nurses' attitude toward the implementation of nursing process in the paediatric departments at Governmental Hospitals in the Gaza Strip?
2. What are the influencing factors which may facilitate the implementation of nursing process in paediatric departments at Governmental Hospitals in the Gaza Strip?
3. What are the obstacles which may impede the implementation of nursing process in paediatric departments at Governmental Hospitals in the Gaza Strip?
4. What is the level of nurses' knowledge regarding the implementation of nursing process in paediatric departments at Governmental Hospitals in the Gaza Strip?

5. Is there a significant difference in the nurses' knowledge and attitudes toward the application of nursing process in paediatric departments with regard to nurses' gender?
6. Is there a significant difference in the nurses' knowledge and attitudes toward the application of nursing process in paediatric departments with regard to nurses' years of experience?
7. Is there a significant difference in the nurses' knowledge and attitudes toward the application of nursing process in paediatric departments with regard to nurses' age?
8. Is there a significant difference in the nurses' knowledge and attitudes toward the application of nursing process in paediatric departments with regard to nurses' workplace?
9. Is there a significant difference in the nurses' knowledge and attitudes toward the application of nursing process in paediatric departments with regard to nurses' educational qualifications?

## **1.7 Context of the study**

### **1.7.1. Socio-demographic context**

The Gaza Strip is a highly crowded area, where approximately 2 million residents live on 365 km<sup>2</sup>. According to MoH annual report (2017), Gaza Strip has a population of 2,000,000 people. The age and sex distribution of population in Palestine showed that 43.3% of Palestinian people were less than 15 years old. The age group (0-4 years) was 16.6%, while ages over 65 years constituted only 2.2%, so Palestinian society is described as a young population (Ministry of health "MoH", 2017).



The natural increase of Gaza population was 3.3%. Despite the progressive decline over years, the number of live births per 1,000 of population per year was still high in comparison to other countries. The Crude birth rate in 2013 was 32.1/1000 capita. The crude death rate declined progressively over years. The crude death rate for Palestine declined from 3.0 per 1000 of the population in 2000 to 2.9 per 1000 of the population in 2013 (Palestinian central Bureau of Statistics “PCBS”, 2016).

### **1.7.2 Palestinian health care system**

The health care system in Palestine is complex and unique and strongly influenced under the so-called Israeli occupation. The consequences of the closures and separation imposed a great challenge for the ministry of health by creating obstacles regarding the accessibility to health care services and affected the unity of the health care system in all Palestinian governorates. There are five main health care providers: the ministry of health, united nations relief and work agency for Palestine refugees in the near east (UNRWA), non-governmental organizations (NGOs), Palestinian military medical services and the private sector 2013 (MoH, 2015).

### **1.7.2 Ministry of health**

Ministry of health bears the heaviest burden as it has the responsibility for ensuring equitable and affordable access to quality health services for all Palestinians. There are 54 primary health care centers in Gaza Strip and 404 centers in West Bank. The hospital services are operated by the government and non-government sectors. According to the MoH in 2012 there were 81 hospitals in Palestine; 51 in West Bank and 30 in the Gaza Strip with a total number of 2399 beds in government hospitals (1.4 bed / inhabitant); 58.4% in WB and 51.6% in GS (MoH, 2016).

### **1.7.3 Paediatric departments at governmental hospitals in the Gaza Strip**

#### **1.7.3.1 Naser Medical complex**

Nasser Medical Complex (NMC), contain two hospitals: Nasser (medical and surgery) and Altahreer hospital (obstetrics and women, and children), the clinical capacity is a total of 258 beds. Altahreer hospital has two pediatric departments with capacity of 50 beds. The complex is situated in the western area of Khan Younis, which was built in 1958 on an area of 50000 m<sup>2</sup>, and serves the area of Khan Younis, with a population of 270,979 inhabitants (MoH, 2016).

#### **1.7.3.2 Alnasser Hospital**

Alnasser pediatric hospital offers pediatric services, and clinical capacity with 151 beds, located in Nasr district in Gaza city which was built in 1962 on an area 4400 m<sup>2</sup>, And serves the area coverage of the province of Gaza from Wadi Gaza, south, until the neighborhood of Sheikh Radwan north, and with a population of 496,411 inhabitants (MoH, 2016).

#### **1.7.3.3 European Gaza Hospital**

European Gaza Hospital (EGH) located in the southern Gaza Strip, located in the south-eastern town of Khan Younis area, which was built in 1987 on an area of 65,000 m<sup>2</sup>, provide medical, surgical, and medical and surgical pediatric services, the tota capacity of the two pediatric departments in the hospital is 60 beds. The total clinical capacity is about 207 beds. The hospital serves the east area of Khan Younis and the northern area of Rafah (MoH, 2016).

#### **1.7.3.4 Al-Aqsa Hospital**

Aqsa Martyrs Hospital provides medical, surgical, pediatric, and women and obstetrics services, the clinical capacity is about 103bed, located in the middle governorate of Deir Al-Balah, it has been built in 2001 on an area of 4000 m<sup>2</sup>, serves the segment of the population living in the central Gaza governorate with a population of 205,535. The hospital has a paediatric department with a capacity of 40 beds (MoH, 2016).

#### **1.7.3.5 Mohamed Al-Durra hospital**

Mohamed Al-Durra pediatric hospital, has the capacity of 72 bed, located in Gaza and it was established on the year 2000 on an area of 1600 m<sup>2</sup> (MoH, 2015).

#### **1.7.3.6 Alnajjar Martyr Hospital**

Alnajjar Martyr Hospital is a hospital that provides medical, surgical, and paediatric services, with clinical capacity of 150 beds, the hospital has a paediatric department with a capacity of 25 beds. It is located in the district of Rafah, it has been built in 2000 on an area of 4000 m<sup>2</sup>, and serves the segment of the population living in the Rafah governorate with a population of 173,372 people (MoH, 2016).

## **1.8 Operational definitions of terms**

### **1.8.1 Nursing process**

Is a systematic problem solving approach which is taught in the faculties of nursing in Gaza governorates, used to identify, prevent and treat actual or potential health problem and promote wellness. This process is composed of six steps namely; assessment, diagnosis, planning, interventions, implementation and evaluation.

### **1.8.2 Nurses' perception and attitudes toward the application of nursing process**

Nurses' attitude is the tendency of nurses who are working in paediatric departments to respond positively or negatively towards the application of nursing process during providing nursing care for the paediatric patients. Measured by the total score given by the nurses on the study questionnaire, the highest score reflects more positive attitude, lowest score reflects more negative attitude.

### **1.8.3 Nurses' knowledge**

The nurses' knowledge regarding nursing process is defined as the factors which are related to the nurses' own knowledge and training regarding how to use the nursing process in paediatric departments in the governmental hospitals in the Gaza strip. Measured by the total score given by the nurses on the study questionnaire, the lowest score reflect poor knowledge, highest score reflects excellent knowledge.

### **1.8.4 Institutional factors**

Institutional factors the factors which interfere (impede or influence) the application of nursing process in pediatric departments of governmental hospitals in the Gaza Strip,

### **1.8.5 Influencing factors**

The researcher defined influencing factors as the ones which influence the application of nursing process in pediatric departments in the governmental hospitals in the Gaza Strip which have been included in the study questionnaire within the domain of institutional factors, measured by mean and mean percentage. It include institutional factors such as the recognition of nursing process by hospital administration as a framework of nursing care delivery, support granted by the hospital administration regarding the implementation of nursing process, inclusion of nursing process implementation in the annual performance appraisal, monitoring the implementation of nursing process by the hospital management monitors, etc.

### **1.8.6 Institutional obstacles**

The researcher defined institutional factors as the ones which impede the application of nursing process in pediatric departments in the governmental hospitals in the Gaza Strip which have been included in the study questionnaire within the domain of institutional factors, measured by mean and mean percentage. It include hospital management does not providing necessary facilities for doing the nursing process by the authorities, absence of specific training for applying it by the authorities, absence of format for writing nursing process, etc.

### **1.8.7 Nurses' demographic factors**

Factors which are related, but not limited to the nurses' gender, nurses' academic qualification, years of experience, job title and monthly income and which may have effect on the nurses' perception and attitudes toward the application of nursing process in paediatric departments.

## **1.9 Variables in the study**

### **1.9.1 Dependent variable**

- Nurses' perception and attitudes toward the application of nursing process.

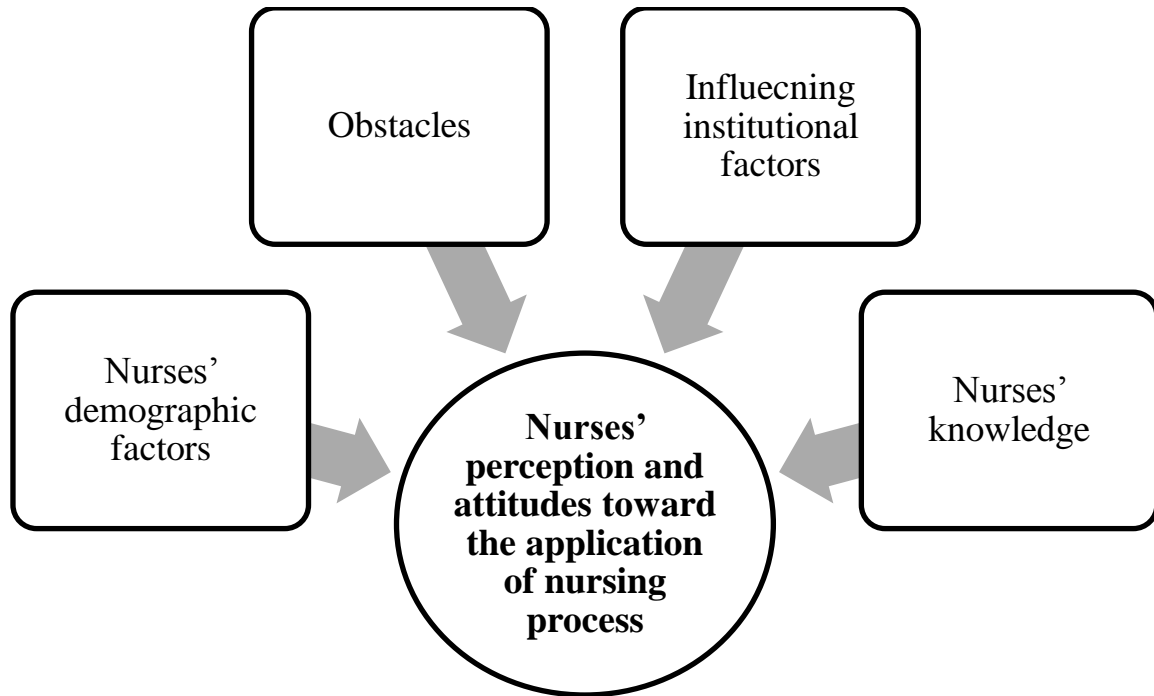
### **1.9.2 Independent variables**

- Institutional factors: Staffing levels trainings, resources, supervision, staff motivation, hospital policy, and stationeries and facilities.
- Nurses' demographic factors: Nurses' gender, nurses' academic qualification, years of experience, job title and monthly income.
- Nurses' knowledge factors: Nurses' own knowledge and training.

## Chapter Two

### Conceptual framework and Literature Review

#### 2.1 Conceptual Framework



**Figure 2.1: Conceptual framework**

Figure 2.1 shows the conceptual framework for this study which is self-developed. The figure shows that there are four independent domains which contribute to the nurses' attitudes toward the implementation of nursing process in the pediatric departments at governmental hospitals. The four factors include influencing factors, obstacles, nurses' demographic factors, and nurses' knowledge. The dependent variable is illustrated in the main domain which is the nurses' attitude toward the implementation of nursing process. The figure shows that there is a proposed effect from the above mentioned independent four factors and the dependent one which is the nurses' attitude toward the implementation of nursing process.

## **2.2 Literature Review**

### **2.2.1 The Nursing Process**

The nursing process is a series of organized steps designed for nurses to provide excellent care (Wagoro and Rakuom, 2015). Berman et al. (2012) defined the nursing process as it is composed of six steps namely assessment, diagnosis, planning, interventions, implementation and evaluation. In the other countries such as Kenya, the steps are revised to including documentation as the last step (Wagoro and Rakuom, 2015). Saranto and Kinnunen (2009) defined the nursing process as a systematic problem-solving approach used to identify, prevent and treat actual or potential health problems and promote wellness. Every stage of the nursing process should be recorded in the patient's clinical history as they provide information on the patient's progress and give information on management and service assessment (Saranto and Kinnunen, 2009).

Nursing process is a technology of care that guides the sequence of clinical reasoning and improves the quality of care. It integrates, organizes, and ensures the continuity of information, enabling nursing staff to evaluate their efficiency and effectiveness and to modify their performance according to patient recovery results (Sasso, et al., 2013). Consequently, this underpins the need for the effective implementation of the nursing process in patients care (Afoi, et al., 2012). Nursing process has been used as a problem-solving activity in nurses' plan of care and further as the foundation for professional practice in everyday nursing practice (Yildirim and Ozkahraman, 2011).



### **2.3 History of the nursing process**

Nursing process was developed by Ida Jean Orlando in the late 1950s with the observations of nurses in action (Adeyemo and Olaogun, 2013). Nursing process has been in use for over 25 years as a systematic approach to nursing practice. They further described nursing process as an efficient and effective method for organizing nursing knowledge and clinical decision making in providing planned client care which has been undergoing constant re-evaluation and revision, but the concepts within the process still remain central to nursing practice (Doenges et al., 2008).

### **2.4 Steps of the nursing process**

The nursing process steps include: assessment, diagnosis, planning, implementation and evaluation. Assessment is an organized dynamic process including systematically collecting data, and ordering the collected data, and documenting the data in a retrievable way. Subjective and objective data are collected from different sources the nurse emphasizes on eliciting a profile of the patient that supplies a sense of the patient's overall health status, providing a picture of the patient (Adeyemo and Olaogun, 2013). Diagnosis means the analysis of collected data to recognize the patient's needs or problems, also called the nursing diagnosis. The purpose of this step is to draw a whole picture regarding the patient's specific needs of concern so which effective care can be planned and given (Adeyemo and Olaogun, 2013). Planning contains setting priorities, establishing goals, considering proper patient outcomes, and determining exact nursing interventions. These actions are accepted as the plan of care (Granero-Molina et al., 2012).

## **2.5 Knowledge and Attitude of the nurses regarding the nursing process**

According Fissehe et al. (2014), poor knowledge on nursing process is a major a gap among nurses which acts as one of the barriers to nursing process implementation, in his study nurses' attitude towards the nursing process was not a major barrier in application of nursing process. The knowledge level of the professional nurse looks at the understanding of the various steps in the nursing process and its characteristics. Florence Nightingale in the mid 1800's proposed that nursing knowledge was based on knowledge of persons and their environment and was different from medical knowledge. It was nearly a century later that nursing theories began to emerge and to be valued by the professional (Berman et al., 2012). Since then, nursing theories and conceptual frameworks have been developed and articulated by academicians, basically to guide clinical practice in nursing. The theories are for the direction and guidance and for structuring professional nursing practice, education and research: for differentiating the focus of nursing from other professions (Berman al., 2012).

Knowledge deficiencies may be best understood as simply deriving from an inability to master new knowledge at the rate and complexity it is being produced. Even well intentioned and highly motivated clinicians have to grapple with the volume of evidence that is constantly becoming available (Grace et al., 2017).

The factor of knowledge plays a significant role in the application and use of nursing process; especially for formulation of nursing diagnosis in developing nursing care plans, skill, experience, interest and beliefs of nurses on the importance of the nursing process. These greatly affect the implementation (Shewangizaw and Mersha, 2015). Theoretically, if nurses fail to carry out necessary nursing care, then the effectiveness of patient progress may be compromised and can lead to preventable adverse patient events (Baraki et al.,

2017). Also, poor knowledge on nursing process is a major a gap among nurses which acts as one of the barriers to nursing process implementation, nurses' attitude towards the nursing process was not a major barrier in application of nursing process (Fissehe et al., 2014). Correct education on application of the nursing process helps in developing nursing science and increasing nurse's participation in promoting the quality of the care given to the patient (Hasson and Arnetz, 2009).

Also, lack of awareness about the importance of nursing process steps, lack of training of the nurses concerned, and lack of time to perform nursing process serves as key barriers in its implementation at clinical set up (Queiroz et al., 2012). The study of Abdelkader and Othman (2017) revealed that 88.0% of the nurses had average knowledge score, and only 4.0% of them had poor knowledge score. On the other hand, nursing process can be effectively implemented when Nurses' show good attitudes toward the process. In some studies it showed that female students had more positive attitudes than male students regarding the ability to use the nursing process in providing high-quality care (Clarke, 2017).

One study revealed that about 80.0% of nursing students believed that the nursing process was able to uniquely define nursing actions and presented an appropriate image of nursing. However, only 50% of students thought that using the nursing process was only a way for providing nursing cares (Anonymous Nursing Students, 2007). According to the findings of the study conducted by Hagos et al. (2014), nurses of the study sites had positive attitude towards the nursing process. One hundred and ninety-nine (99.5%) of the respondents had positive attitudes. A study done in Saudi Arabia by Mahmoud and Bayoumy (2014) showed that knowledge factor influenced the use of nursing process more than other variables. They also found out that the biggest problems currently facing the nursing profession is the implementing the nursing process. Some of the factors that can

influence it were the knowledge, profession, attitude and institution. More importantly, Baraki et al. (2017) revealed that the nurses with an educational level of bachelor degree have 6.972 times more likely to implement the nursing process than those who have diploma qualified. Also, nurses with no consistent material supply to use the nursing process have 95.1% less likely to implement the nursing process than nurses with consistent material supply. On the other hand, the majority of the nurses did not implement the nursing process properly due to poor knowledge of nurses, poor nurses' skills.

In another study carried out in Nigeria on the factors that affecting the use of the nursing process in health institutions the findings showed that the combination of all the predictor variables which include knowledge factor, institutional factor, professional factor and attitude factor have a positive influence on the use of nursing process while knowledge factor had the highest predictive value on the use of nursing process (Adeyemo and Olaogun, 2013).

## **2.6 Implementation of nursing process**

Implementation of nursing process occurs when the plan of care is put into action, and the nurse performs the planned interventions. Individual knowledge and expertise and agency routines allow the flexibility that is necessary to adapt to the changing needs of the patient. Evaluation is accomplished by determining the patient's progress toward attaining the known outcomes and by monitoring the patient's reaction to efficiency of the preferred nursing interventions for the reason of altering the plan as indicated (Dantas et al., 2016).

Despite, the importance of studying and using the nursing process, the nurses use problem solving process in order to arrange and give nursing services. Nursing process helps the nurse to use critical thinking for clinical judgments. Principles for implementing the nursing process is the systematic registration (Abdelkader and Othman, 2017).

Additionally, a cross-sectional study conducted by Jansson et al. (2010) to use the promotion action on research implementation in health services framework (PARIHS) to explore important factors and conditions at hospital wards that had implemented standardized nursing care plan (SNCPs). The study result showed that the main factors that had motivated the nurses to implement SNCPs were that they were easy to understand and follow as well as corresponding to organizational norms. The SNCPs were normally based on clinical experience, although research more frequently formed the basis of the SNCPs at the university hospital. Internal facilitators acted as important educators, who provided reminders to use the SNCP and feedback to the SNCP users (Abdelkader and Othman, 2017). The patient experience was not considered valuable. Those who claimed that the implementation was successful were generally more positive in all measurable aspects. The use of SNCPs was rarely evaluated. The study concluded that the clinical experience was considered important by the nurses, while they attributed little value to the patient experiences, and the successful implementation of research based SNCPs requires internal facilitators with knowledge of evidence-based nursing (Jansson et al., 2010)

Shewangizaw and Mersha (2015) conducted a cross-sectional study to assess the factors affecting implementation of nursing process among nurses in Arbaminch General Hospital, using self-administered pre-tested Semi Structured questionnaire and observational checklist used among randomly selected 105 nurses. The study results revealed that 35.7% of respondents were challenged to provide their nursing care due to patients' inability to collect the required material for care provision. Results also revealed that the factors affecting implementation of nursing process were working in a stressful environment (0.23 times less likely to implement nursing process than those working in organized environment).

Also, highly knowledgeable nurses were 8.78 times more likely to implementation of nursing process than nurses who were not knowledgeable and economic status of patient to collect material for nursing care were negatively associated with implementation of nursing process. On the other hand, the study of Shewangizaw and Mersha (2015) has identified lack of facility from organizational factors, economic status of the patient to collect material for nursing care, early discharge, lack of cooperation and complicated problems from patient related factors and level of knowledge were among those factors highly affecting nursing process implementation. Nearly, one third of respondents have consistent with the implementation of nursing process in the clinical setting. This factors cause poor quality of nursing care disorganized caring system, conflicting role, medication error and re-admission with similar problems, dissatisfaction with the care patients have received, and increased mortality (Shewangizaw and Mersha, 2015). Nursing process contributes to professionalization, promotion of client's satisfaction and documentation which form global standards upon which nursing care is audited (Afolayan et al., 2013).

Moreover, it is difficult to bring significant improvement in nursing care if nurses don't use nursing process to assess, plan, implement, and evaluate clinical conditions of the client. Moreover, malpractice of nursing process will affect quality of nursing care as a result of different factors (Shewangizaw and Mersha, 2015). According to study done at Addis Ababa indicate that, working overtime (81.8%), working without payment (12%), misconduct (10.9%), high flow of patient, knowledge error, conflicting roles, high employee turnover and for 35.4% less recognition, unsympathetic manager, 16.1% in a disorganized organizational structure, early discharge and poor participation of patients associated with professional, organizational and patient related factors in implementation of nursing process (Asratie, 2011).

The study of Adeyemo and Olaogun (2013) was conducted to assess the factors affecting the application of nursing process in Health institutions in Ogbomoso town in Nigeria. A survey design was adopted using questionnaires on 95 correspondents. The study results showed that the knowledge factor has the highest predictive value of 0.350 in the use of nursing process, followed by institutional factor and professional factor, the least is the attitude factor. The study results concluded that the knowledge factor has the most important influence on the use of nursing process and it was recommended that the introduction of educational programmes will enhance nurses' ability to use nursing the process to improve the quality of patient's care.

## **2.7 Obstacles related to the application of nursing process**

There are many obstacles that interferes the implementation of the nursing process, some of these obstacles related to individual factors and the others related to management or policy factors. Individual factors as insufficient information, no belief in doing the patient care according to it, lack of sufficient motivation in doing nursing pro, lack of enough skill for doing it, uninteresting in doing the nursing pro, un-cooperation among the nurses (Akbari and Shamsi, 2011).

Management factors include repetitious replacement of the nurses, shortage of nursing staff, no format for writing, lack of monitoring on nursing process, necessary facilities are not available, lack of enough time, lack of attention to its importance, lack of specific instructions, lack of education, lack of enough trained nurses, hospital policies in non-implementation of the nursing process (Mangare et al., 2016). The obstacles which impede the application of nursing process in the hospitals are related to nurses' perception and experience, work, resources, and others related to administration (Mahmoud and Bayoumy, 2014). In this study, 68.2% of nurses agreed that barriers related to nursing process were

related to lack of time to implement nursing process, evolution on a daily basis, difficulty with defining diagnosis characteristics, and nursing process being time consuming. According to Toogi et al., (2010) obstacles related to the application of nursing process were perceived as the most challenging from viewpoint of majority of nurses. Dominguez-Bellido et al., (2012) further reported that most of nurses reported lack of sufficient time for implementation of the nursing process as a key barrier not forgetting lack of resources. Lack of resources as a barrier was supported by Mamseri (2012) and Mahmoud and Bayoumy (2014) in their study where they observed that many nurses complained of lack of sufficient resources and time as the most important barrier to implementation of the nursing process.

The study that was conducted by Potter and Perry (2007) revealed that lack of adequate time, poor nurse patient ratio, high patient turn over and lack of equipment and supplies are highlighted as hindrances to implementation of the nursing process. Based on the study conducted by Abdelkader and Othman (2017), factors affecting nursing process implementation from nurses point of view include insufficient information regarding nursing process, absence of any idea in applying it, absence of sufficient enthusiasm in using the nursing process, shortage of nursing staff, no format for writing, absence of follow up by the hospital authorities, inadequate time for using it, no attention to its importance by the nursing authorities, and deficient in clear instruction for applying the nursing process by the authorities.

Another cross sectional study conducted by Hagos et al. (2014) to assess the application of nursing process and its affecting factors in Mekelle Zone Hospitals using quantitative and qualitative methods revealed that the majority (90%) of the respondents have poor knowledge and 99.5% of the respondents have a positive attitude towards the nursing process. All of the respondents said that they did not use the nursing process during



provision of care to their patients at the time of the study. Also, the majority (75%) of the respondent said that the nurse to patient ratio was not optimal to apply the nursing process. The study concluded that the nursing process is not yet applied in all of the six hospitals and the studied hospitals should consider the application of the nursing process critically by motivating nurses and monitor and evaluate its progress.

On the other hand, Lopes et al. (2010) were of the view that the nursing diagnoses step is most often the biggest barrier to successfully implement the nursing process in the practice. Implementing the nursing process and forming correct nursing diagnoses is challenging. Normally nursing diagnosis should consist of four parts as label, definition, signs and symptoms, and related factors. Many nurses can identify patient problems but the clarity of the problem with ideas formed and needed practice change can be difficult to achieve (Lusardi, 2012).

Additionally, a study of Yeboah et al. (2017) revealed that the participants indicated the articles which hinder the application of nursing process including: shortage of the necessary professional nurses to care for the total number of patients admitted; frequently, they even find it difficult to meet the basic needs of the patients; and this also results in a work overload for the nurses. The nurses easily become tired; and they are not able to provide quality care to the patients.

## **2.8 Institutional factors related to the application of nursing process**

Nursing process can be effectively applied if there is a collaboration of hospital administration with the implementing nurses for the process involves issues of finance, equipments, implementing tools and personnel. Institutional factors that impede the application of nursing process include shortage of resources, lack of knowledge, high patient nurse ratio/work load, and lack of training and motivating factors affected the

application of the nursing process (Akbari and Shamsi, 2011). Moreover, poor equipment, staff shortage, absence of nurses' training, and unattractive service conditions can as well lead to non-application of nursing process (Mahmoud and Bayoumy, 2014). Poor nursing care in any institution arises as a result of barriers to the use of nursing process in inpatient care. It is therefore important for the hospitals as well as the nurses to seek means to upgrade the knowledge of on the nursing process and its implementation and the nurses to improve their knowledge on the nursing process application. The government must reemphasize on the provision of adequate resources such as materials, nursing human power, and motivate nursing professionals so that the nursing process may be applied (Mahmoud and Bayoumy, 2014).

The study of Hagos et al. (2014) concluded that all of the nurses who have been included in their study said that they did not use the nursing process during provision of care to their patients due to the problem of patient ratio that was not optimal to apply the nursing process. Also, Adeyemo and Olaogun (2013) in their study, concluded that there was a partial correlation between institutional factor and the application of nursing process. Moreover, an exploratory study was conducted by Mahmoud and Bayoumy (2014) to explore the barriers and facilitators for execution of nursing process from nurses' perspective using a convenient sample of 148 nurses. The study utilized a questionnaire as a tool for a tool for data collection. The study results revealed that the institutional factor that affect the application of nursing process include work, resources and management, all of these factors have been ranked the highest predictive factor in the use of nursing process.

Additionally, Adeyemo, and Olaogun (2013) in their study revealed that the institutional factors reducing the problem associated with medical issues in the clinics, the higher the use of nursing process. While the study of Olaogun, et al. (2011) noticed that the

institutional factors does not pose a barrier to the use of nursing process, and that hospital management make nursing process booklets available for the use of nurses in caring for their patients. Moreover, Thuvaraka et al. (2018) conducted a cross-sectional study to assess the nurses' knowledge on nursing process and to identify the factors impact on implementation of nursing process in special units at Teaching Hospital, Jaffna on 100 nurses working in special units at Teaching Hospital, Jaffna. The researchers used a convenient sampling to collect data. The study revealed that the institutional factors took the greatest part for lack of implementation of nursing process. They concluded that alleviating the barriers based on the personal and institutional factors can increase the application of nursing process in health care service (Thuvaraka et al., 2018).

## **2.9 Association between the application of nursing process and the nurses' demographic factors**

Several research studies have been conducted to show the association between nurses' demographic factors and the application of nursing process. A study of Hagos et al. (2014) concluded that the knowledge of the nurses on nursing process has a significant relationship with their educational status. Compared to the knowledge of diploma nurses, the knowledge of bachelor degree nurses on nursing process is higher by about 11.5 times. Nurses' demographic characteristics such as age, years of experience and academic qualification have significant impact on the application of nursing process, nurses' academic qualification has a direct statistically significant relationship with the knowledge of nurses on nursing process (Mahmoud and Bayoumy, 2014). Lack of previous experience by nurses with regard to the nursing processes can also lead to resistance in its implementation as nurses may think that nursing process implementation is complex, demands a lot of time and therefore, it is not feasible in daily practice (Brandalize et al., 2005). The study of Abdelkader and Othman (2017) revealed a significant association

between knowledge score of nursing process and age group of nurses, their study also revealed that 89.9% of female nurses had average knowledge score and there was a significant association between knowledge score and years of experience of the nurses. The findings of Grace et al. (2015) revealed a significant difference in knowledge of the nursing process and on the number of nurses who stated that they utilize the nursing process. Also, there was no significant difference on the nurses' perspectives towards the nursing process and the number of patients drawn for a care plan.

Moreover, a study conducted by Yeboah et al. (2017) to identify the factors that influence the clinical utilization of the nursing process at a hospital in Ghana. The study revealed that the participants mentioned that the shortage of nurses, which was evident in the low nurse-patient ratio, was one of the main factors that prevented them from implementing the nursing process in the ward. Since the nurses were few, the work load of one nurse was overwhelming, prevented them from effectively so that it prevented them from effectively implementing the nursing process.

## **2.10 Strategies to facilitate the use of nursing process**

On the strategies promoting the implementation of nursing process, Hagos et al. (2014) showed that 40.37% of the respondents suggested regular supply of nursing process materials and motivating nurses to have interest in writing and implementing nursing process. These results suggested regular supervision of nurses by the head nurse, 40.61% handling over nursing process at each shift, 40.77% continuous retraining of nurses on nursing process in the continue education, and 4.77% encouraging cooperation among nurses.

## **Chapter Three**

### **Methodology**

#### **3.1 Introduction**

This chapter addresses issues related to methodologies used to answer the research questions, the chapter commences with study design, study population, study setting, period of the study, sample size, sampling and statistical procedures.

#### **3.2 Study design**

The design of this study was a quantitative, analytical cross-sectional. This design was useful for describing the study construct. It's suitable in term of people, resources and it is relatively practical and manageable.

#### **3.3 Study Setting**

This study was carried out in the paediatric departments at the governmental hospitals in the Gaza Strip. The hospitals which have been included in the study are: 1) Alnajjar Hospital, 2) Eurpean Gaza Hospital, 3) Nasser Medical complex, 4) Al-Aqsa Hospital, 5) Alnasser hospitals, and 6) Aldorra Hospital.

#### **3.4 Study population**

The target population of this study consisted of the nurses who are working in the paediatric departments in the governmental hospitals in the Gaza Strip. The total number of the nurses who are working in paediatric departments is 203. All of the nurses who are working in the paediatric departments in the governmental hospitals in the Gaza Strip were included in this study.

### **3.5 Response rate**

In the current study, 184 out of 203 nurses have responded to fill up the study questionnaire, with a response rate 90.6%.

### **3.6 Inclusion criteria**

Registered and formally employed nurse, male and female nurses those who are interested to participate in the study, and have at least 6 months experience were included in the current study.

### **3.7 Exclusion criteria**

Volunteer nurses, and those who are not interested to participate in the study were excluded.

### **3.8 Instrument of the study**

A structured self-administered questionnaire was used for this study. The researcher developed the questionnaire based on previous studies (Dennis, 2015) and with consultation of experts in the field of the study. The first part of the questionnaire represented socio-demographic characteristics of the nurses such as nurses' gender, age, academic qualification, years of experience, salary, and their marital status. The second part of the questionnaire represented questions related to nurses attitudes toward the implementation of nursing process in the paediatric departments, the third part represented institutional factors which may influence and/or impede the implementation of nursing process. The last part consisted of knowledge and training regarding the use of nursing process.

### **3.9 Measurements and scales**

A five point likert scale from 0 “strongly disagree” to 4 “strongly agree” was applied in the second and third part of the study questionnaire. Some of negative questions had to be reverse coded. The mean of attitude score was calculated by multiplying the highest score (4) by the total summation of the 25 questions in the domain; the total score was 100. On the other hand, the mean of institutional factors was calculated by multiplying the highest score (4) by the total summation of the 13 questions in the domain; the total score was 52. While the mean of nurses’ knowledge was calculated by summation of all questions score, each question granted a score of 1 for correct answer and zero score for incorrect one, except for the first question, it has a score of five. The total knowledge score was 10 with a mean percentage of 100.0%.

More importantly, the median score was used as a cut of point for nurses’ attitude to separate the positive and negative score. Those who had attitude median score below the mean score were considered to have negative attitude, and vice versa.

### **3.10 Pilot study**

Pilot study was conducted on 30 nurses in order to provide feedback about the questions and ensure the reliability of questionnaire.

### **3.11 Validity and Reliability**

#### **3.11.1 Face and content validity**

The questionnaire was submitted to expert's panel with experience and knowledge in the field as arbitrates who make suggestions and judgment about the adequacy of the questionnaire. The experts expressed their opinions and suggestions about the clarity, ease, simplicity, comprehensiveness of items, domains and statements of the

questionnaire; therefore the researcher have had some changes in the questionnaire, such as delete or merge or reformulation of some items.

### 3.11.2 Reliability of the instrument

Reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring. For the most purposes reliability coefficient was measured using Cronbach's coefficient alpha, the total Cronbach's coefficient alpha coefficient for the questionnaire is 0.817, which us very good. The results of Cronbach's' alpha are illustrated below.

**Table 3.1: Cronbach's Alpha for reliability for all domains**

<b>Domain</b>	<b>No. of Items</b>	<b>Cronbach's coefficient alpha</b>
Nurses' perception and attitudes towards the implementation of nursing process	25	0.826
Institutional factors which interfere with the application of nursing process	13	0.771
Total	38	0.817

### 3.11.3 Criterion related validity

#### 3.11.3.1 Internal consistency

Internal consistency or criterion-related validity involves the relationship between an instrument and an external criterion. The instrument is said to be valid if its scores correlate highly with scores on the criterion (Gregory, 2000). Table 3.2 and table 3.3 illustrate the correlation coefficients between each domain and total degree of instrument; all the coefficients are positive and significant at the 0.001, 0.01 and 0.05 level, that means a construct validity for what it is supposed to be measured.



**Table 3.2: Correlation coefficient for each paragraph and total degree of attitude domain of the Questionnaire**

<b>No .</b>	<b>Domain</b>	<b>Pearson correlation</b>	<b>P value</b>
<b>Attitude</b>			
1	I like the concept of Nursing process (NP)	0.635	0.000
2	Identification of patents priority is easy using NP	0.700	0.001
3	NP enables nurse to provide quality patient centered care	0.731	0.000
4	The NP can be implemented for every patient	0.753	0.000
5	The nursing process is tedious	0.605	0.000
6	I like the aim of nursing process	0.830	0.000
7	I am convinced the NP will work if applied in patient care	0.874	0.000
8	The nursing process is an elaborated Kardex system	0.747	0.000
9	The nursing process should be used by BSc and above nurses only	0.792	0.000
10	The nursing process works well in practice	0.758	0.000
11	The nursing process can be used in any settings	0.699	0.000
12	There is no enough time to apply NP during patient care	0.730	0.001
13	Nursing process is a waste of time	0.810	0.000

**Table 3.2: Correlation coefficient for each paragraph and total degree of attitude domain of the Questionnaire (Continued)**

<b>No</b>	<b>Domain</b>	<b>Pearson correlation</b>	<b>P value</b>
<b>Attitude</b>			
14	I am ready for the application of nursing process	0.806	0.000
15	The nursing process simplifies the awareness of patient's needs	0.780	0.000
16	Priorities of care are easy to identify using NP	0.866	0.002
17	I am fed up with hearing about the nursing process	0.772	0.026
18	The nursing process involves too much of paper work	0.857	0.001
19	Nursing process enable nurses to provide quality of nursing care to pts	0.799	0.000
20	I am willing to apply nursing process during patient care	0.741	0.000
21	I think introduction of nursing process will cause a problem	0.841	0.000
22	I think that the patient will not like to be cared for using the nursing process	0.711	0.001
23	I think that the nursing staff have no willingness to apply nursing process	0.888	0.000
24	I think that other staff will never accept the nursing process	0.920	0.000
25	Nursing process should be drawn for the very sick patients only	0.391	0.007

**Table 3.3: Correlation coefficient for each paragraph and total degree of institutional factors domain of the Questionnaire**

No	Domain	Pearson correlation	P value
<b>Attitude</b>			
1	Recognition of nursing process by hospital administration as a framework of nursing care delivery	0.753	0.000
2	Support granted by the hospital administration regarding the implementation of nursing process	0.764	0.000
3	Inclusion of nursing process implementation in the annual performance appraisal	0.597	0.000
4	Monitoring the implementation of nursing process by the hospital management monitors	0.754	0.000
5	Hospital supply of relevant tools for the implement nursing process	0.785	0.000
6	Availability of papers, forma, and nursing process books in the hospital	0.849	0.000
7	Availability of salary and promotion motivating for those who apply nursing process	0.612	0.000
8	The nurse/patient ratio is optimal to apply the nursing process	0.667	0.000
9	Hospital management does not providing necessary facilities for doing the nursing process by the authorities	0.640	0.000
10	Absence of specific training for applying it by the authorities	0.786	0.000
11	Absence of format for writing nursing process	0.660	0.000
12	Absence of follow up by the authorities to apply the nursing process	0.537	0.000
13	Absence of attention to the importance of nursing process given by authorities	0.700	0.000

### **3.12 Statistical management**

To achieve the goal of the study, the researcher used the statistical package for the Social Sciences (SPSS, IBM Version 22) for analysing the data. The researcher used descriptive statistics such as frequencies, mean, standard deviation and percentages. Independent sample *t* test, One-Way ANOVA and Pearson correlation have been used.

### **3.13 Ethical and administrative consideration**

The researcher was committed to all ethical considerations to conduct this study, administrative approval was obtained from Al-Quds University and ministry of health in the Gaza strip, ethical approval was obtained from Helsinki committee. A formal letter was submitted to the ministry of health in the Gaza Strip to obtain approval to visit the hospitals. Informed consent was obtained from all subjects as well to fill up the questionnaire.

### **3.14 Period of the study**

The study was conducted during the period from March, until October, 2018.

## Chapter Four

### Results and Discussion

#### 4.1 Introduction

This chapter illustrates the results of statistical analysis of the data, including descriptive analysis that presents the socio-demographic characteristics of the study sample and answers to the study questions. The researcher used simple statistics including frequencies, means and percentages, also independent sample *t* test, One-way ANOVA and Pearson correlation were used.

#### 4.2 Sample distribution according to the participants' gender, age groups, and marital status

**Table 4.1: Sample distribution according to the participants' gender, age groups, and marital status (N= 184)**

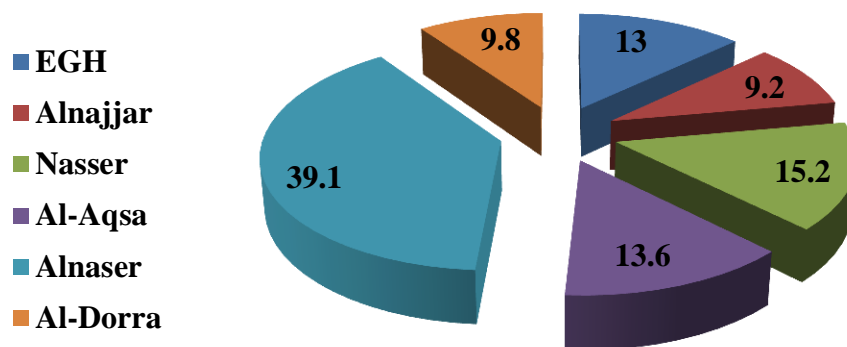
Variables		Number	Percentage (%)
Gender	Male	76	41.3
	Female	108	58.7
Age groups	Below 30 years	82	44.6
	30 – 40 years	80	43.5
	More than 40 years	22	12.0
Marital status	Single	54	29.3
	Married	111	60.3
	Others <sup>1</sup>	19	10.3
<b>Total</b>		<b>184</b>	<b>100.0</b>

<sup>1</sup>Including 2 widowed

Table 4.1 shows the distribution of study participants' according to the nurses' gender, age groups, and their marital status. The table shows that more than half (58.7%) of the nurses

in the current study are females, this could be attributed to the fact that the majority of the nurses in the pediatric wards in the governmental hospitals are females. Also, the table shows that 82 (44.6%) of them are below 30 years old, and 2 (12.0%) are more than 40 years old. Moreover, the table shows that 111 (60.3%) of the nurses are married, and 54 (29.3%) of them are single.

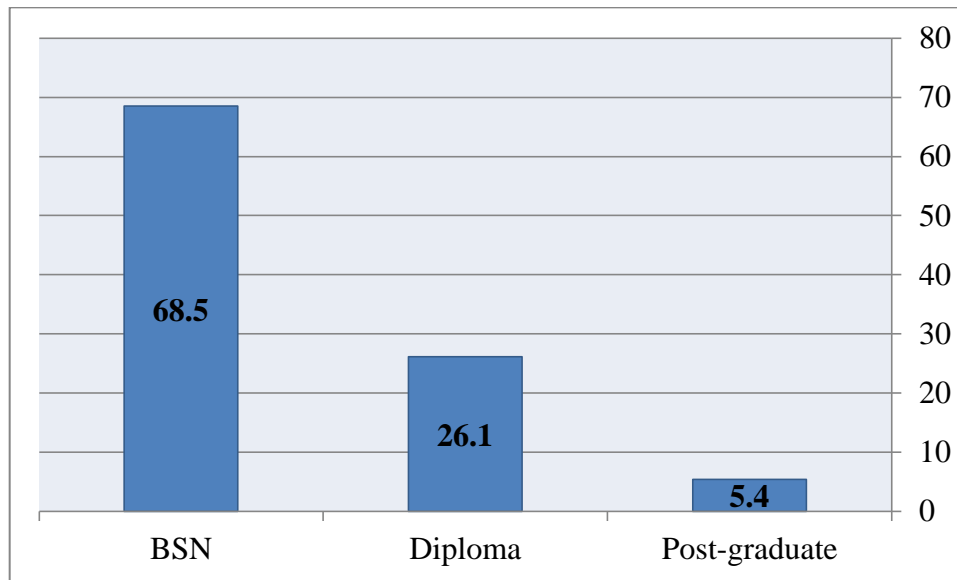
#### 4.3 Sample distribution according to the participants' workplace



**Figure 4.1: Sample distribution according to the participants' workplace**

Figure 4.1 shows that 39.1% of the nurses in the current study are working at Alnasser hospital, 15.2% are working in Nasser medical complex, 13.6% are working at Al-Alqsa hospital, and only 9.2% are working at Alnajjar hospital. This could be attributed to the actual numbers of nurses in pediatric wards in the governmental hospitals, in which Alnajjar hospital has the least number of nurses compared to the highest number of them at Alnasser hospital since the later is a pediatric specialized hospital.

#### 4.4 Sample distribution according to the educational level of the participants



**Figure 4.2: Sample distribution according to the educational level of the participants**

Figure 4.2 shows that 68.5% of the nurses in the current study have bachelor degree in nursing, 26.1% have diploma, and 5.4% of them have post-graduate studies (high diploma and/or master). Bachelor degree has the highest number due to the fact that the nurses nowadays are pursuing their study to have the bachelor degree.

#### 4.5 Sample distribution according to the participants' years of experience, and level of income

**Table 4.2: Sample distribution according to the participants' years of experience, and level of income**

Variables		Number	Percentage (%)
<b>Years of experience</b>	≤ 5 years	74	40.2
	6 – 10 years	57	31.0
	11 – 15 years	29	15.8
	More than 15 years	24	13.0
<b>Level of income</b>	≤ 1000 Shekel	54	29.3
	>1000 - ≤ 1500 Shekel	100	54.3
	More than 1500 Shekel	30	16.3
	Total	184	100.0

Table 4.2 shows the distribution of study participants' according to the years of experience and level of income. The table shows that 74 (40.2%) of the nurses are working since 5 years and below, 57 (31.0%) of them are working for 6 – 10 years, while 24 (13.0%) are working for more than 15 years. This could be attributed to the largest number of young adult nurses who are working in the governmental hospitals especially after the year 2007, in addition to the large number of nurses who have been retired.

Moreover, the table shows that 100 (54.3%) of the nurses have average income level between 1001 – 1500 Shekel, and only 30 (16.3%) of them have average income more than 1500 Shekel.



#### **4.6 Mean score of nurses' attitude and knowledge regarding the application of nursing process**

**Table 4.3: Mean score of nurses' attitude and knowledge regarding the application of nursing process**

<b>Domain</b>	<b>Maximum score</b>	<b>Mean score</b>	<b>Mean %</b>
<b>Level of attitude</b>	100	66.71	66.71
<b>Knowledge</b>	10	6.58	65.81

The table shows that the mean score of nurses' attitude toward the application of nursing process. The maximum score of nurses' attitude is 100 with mean percentage 100.0%. The score of nurses' attitude is 66.71 (66.71%). Also, table shows that the mean score of nurses' knowledge toward the application of nursing process, the maximum score of nurses' knowledge is 10 with a mean percentage 100.0%. The mean score of nurses' knowledge is 6.58 (65.81%).

#### 4.7 The level of nurses' attitude and knowledge regarding the application of nursing process

**Table 4.4: Classifications of nurses' attitude and knowledge regarding the application of nursing process**

Variables		Number	Percentage
Level of attitude <sup>1</sup>	Below 67.0% (Negative) <sup>2</sup>	89	48.4
	≥ 67.0% - (Positive)	95	51.6
	Total	148	100.0
Level of Knowledge <sup>3</sup>	Below 60.0% (Poor knowledge)	57	31.0
	60.0 – 69.99% (Fair)	28	15.2
	70.0 – 79.99 (Good)	30	16.3
	80 – 89.99 (Very good)	41	22.3
	90.0 – 100.0 (Excellent)	28	15.2
	Total	184	100.0

<sup>1</sup> Total score of attitude is 100 (The maximum score)

<sup>2</sup> Median score (67.0) was taken as a cut of point

<sup>3</sup> Total score of knowledge is 100 (The maximum score)

Table 4.4 shows the classifications of nurses' attitudes and their knowledge regarding the nursing process in paediatric wards. The table shows that 51.9% of the nurses who are working in paediatric wards have positive attitude toward nursing process, and 48.4% of them have negative attitude. Additionally, 31.0% of the nurses have poor knowledge in the nursing process, 22.3% of them have very good scores, and 15.2% have excellent score.

#### 4.8 Nurses' knowledge for each item regarding the application of nursing process

**Table 4.5: Mean score of each item in the nurses' knowledge regarding the application of nursing process**

No	Nurses' knowledge	Max score	Mean score	Mean %
1	Rating self about understanding of nursing process	5	3.68	73.6
2	Received training about nursing process	1	0.50	50.0
3	Training enables the nurse to practice nursing process competently	1	0.50	50.0
4	The first step in nursing process	1	0.74	74.0
5	Option that is not considered as a component of nursing process	1	0.81	81.0
6	The following action comes after assessing clients' condition and identification of appropriate nursing diagnosis	1	0.35	35.0
	<b>Total</b>	10	6.58	65.81 <sup>1</sup>

The table shows that mean score of each item in the nurses' knowledge regarding the application of nursing process. The table shows that the mean percentage of nurses' rating their selves about understanding of nursing process is 73.6%. Also, 50.0% of the nurses in this study received training about nursing process either in the university or on job training and ministry of health.

Moreover, 50.0% of the nurses stated that the training enables them to practice nursing process competently. On the other hand, 74.0 of the nurses answered the question about "The first step in nursing process" correctly, 81.0% of them answered the question about

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<sup>1</sup> Calculated by dividing the mean% by the max score

“Option that is not considered as a component of nursing process” correctly, while only 35.0% answered the last question correctly.

#### **4.9 Differences in the level of nurses’ attitude and knowledge regarding the application of nursing process with regard to their gender**

**Table 4.6: Differences in the level of nurses’ attitude and knowledge regarding the application of nursing process with regard to their gender**

<b>Variable</b>	<b>Mean (SD)</b>		<b><i>t</i> statistics (df)</b>	<b><i>p</i> value*</b>
	<b>Males</b>	<b>Females</b>		
Level of attitude	65.18 (9.28)	67.79 (9.17)	-1.892 (182)	0.060
Level of knowledge	63.28 (19.55)	67.59 (17.50)	-1.564 (182)	0.120

Independent sample *t* test

Table 4.6 shows that there are no significant differences in the level of attitude regarding nursing process between male and female nurses ( $p > 0.05$ ). Moreover, there are no significant differences in the level of knowledge regarding nursing process between male and female nurses ( $p > 0.05$ ).

#### 4.10 Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their educational qualification

**Table 4.7: Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard their educational qualification**

Variable	N	Mean (SD)	F (df)	P value*
<b>Level of attitude</b>				
Diploma	48	66.81 (10.18)	1.443 (2, 181)	0.239
BSN	126	67.06 (6.35)		
Post-graduate	10	61.90 (14.60)		
<b>Level of knowledge</b>				
Diploma	48	65.20 (16.75)	0.424 (2, 181)	0.655
BSN	126	65.63 (19.49)		
Post-graduate	10	71.00 (119.97)		

\*One way ANOVA

Table 4.7 shows that there are no significant differences in the level of attitude regarding the application of nursing process among different educational levels of nurses ( $p > 0.05$ ). Moreover, there are no significant differences in the level of knowledge regarding nursing process among different educational levels of nurses ( $p > 0.05$ ).

#### 4.11 Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their workplace

**Table 4.8: Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard their workplace**

Variable	N	Mean (SD)	F (df)	P value*
<b>Level of attitude</b>				
European Gaza hospital	24	65.54 (9.00)	4.889 (5, 178)	<0.001
Alnajjar hospital	17	65.29 (4.77)		
Nasser medical complex	28	70.07 (8.70)		
Al-Aqsa hospital	25	73.16 (9.01)		
Alnasser hospital	72	64.75 (9.62)		
Al-Dorra hospital	18	63.33 (7.91)		
<b>Level of knowledge</b>				
Alnajjar hospital	24	67.91 (19.33)	0.786 (5, 178)	0.561
European Gaza hospital	17	62.94 (16.86)		
Nasser medical complex	28	68.57 (20.49)		
Al-Aqsa hospital	25	66.40 (18.45)		
Alnasser hospital	72	66.25 (18.26)		
Al-Dorra hospital	18	58.88 (16.40)		

\*One way ANOVA

Table 4.8 shows that there is a significant difference in the level of attitude regarding nursing process among different hospitals ( $p < 0.05$ ). Post hoc analysis was done using Dunnett test and shows that the difference is significant between the nurses who are working in AlAqsa hospital and those who are working in Alnajjar hospital in favor to those who are working in AlAqsa hospital. Moreover, there is no significant differences in the level of knowledge regarding nursing process among different hospitals ( $p > 0.05$ ).

#### 4.12 Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their years of experience

**Table 4.9: Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their years of experience**

Variable	N	Mean (SD)	F (df)	P value*
<b>Level of attitude</b>				
≤ 5 years	74	68.59 (8.77)	2.554 (3, 180)	0.057
6 – 10 years	57	66.71 (9.47)		
11 – 15 years	29	63.55 (9.34)		
> 15 years	24	64.75 (9.41)		
<b>Level of knowledge</b>				
≤ 5 years	74	67.70 (18.39)	1.178 (3, 180)	0.320
6 – 10 years	57	64.03 (19.44)		
11 – 15 years	29	61.72 (19.28)		
> 15 years	24	69.16 (14.42)		

\*One way ANOVA

Table 4.9 shows that there is no significant difference in the level of nurses' attitude regarding the application of nursing process among their different years of experience ( $p > 0.05$ ). Also, there are no significant differences in the level of nurses' knowledge regarding the application of nursing process among their different years of experience ( $p > 0.05$ ).

#### 4.12 Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their age groups

**Table 4.10: Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their age groups**

Variable	N	Mean (SD)	F (df)	P value*
<b>Level of attitude</b>				
Below 30 years	82	69.14 (8.67)	6.667 (2, 181)	0.002
30 – 40 years	80	64.01 (9.13)		
More than 40 years	22	67.50 (9.78)		
<b>Level of knowledge</b>				
Below 30 years	82	67.80 (17.64)	3.032 (2, 181)	0.051
30 – 40 years	80	62.25 (19.35)		
More than 40 years	22	71.36 (16.12)		

\*One way ANOVA

Table 4.10 shows that there is a significant difference in the level of nurses' attitude regarding the application of nursing process among their different age groups ( $p < 0.05$ ). Post hoc analysis was done using Scheffe test and shows that the difference is significant among the nurses who are below 30 years old and those who are 30 – 40 years old in favor to those who are below 30 years old.

Also, there is no significant difference in the level of nurses' knowledge regarding the application of nursing process among their different age groups ( $p > 0.05$ ).



#### 4.14 Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their level of income

**Table 4.11: Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their level of income**

Variable	N	Mean (SD)	F (df)	P value*
<b>Level of attitude</b>				
≤ 1000 Shekel	54	69.64 (8.57)	4.638 (2, 181)	0.011
>1000 - ≤ 1500 Shekel	100	66.01 (8.74)		
More than 1500 Shekel	30	63.80 (11.04)		
<b>Level of knowledge</b>				
≤ 1000 Shekel	54	64.62 (17.87)	0.320 (2, 181)	0.727
>1000 - ≤ 1500 Shekel	100	65.80 (19.49)		
More than 1500 Shekel	30	68.00 (16.06)		

\*One way ANOVA

Table 4.11 shows that there is a significant difference in the level of nurses' attitude regarding the application of nursing process among their different level of income ( $p < 0.05$ ). Post hoc analysis was done using Scheffe test and shows that the difference is significant between the nurses who have average income less than or equal 1000 Shekel and those who have average income more than 1000 to less or equal 1500 Shekel in favor to those who have average income level  $\leq 1000$  Shekel.

**4.15 Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their marital status**

**Table 4.12: Differences in the level of nurses' attitude and knowledge regarding the application of nursing process with regard to their marital status**

Variable	N	Mean (SD)	F (df)	P value*
<b>Level of attitude</b>				
Single	54	67.98 (10.04)	2.518 (2, 181)	0.083
Married	111	65.55 (9.15)		
Divorced	19	69.89 (6.60)		
<b>Level of knowledge</b>				
Single	54	65.74 (18.18)	0.886 (2, 181)	0.414
Married	111	64.95 (18.43)		
Divorced	19	71.05 (19.40)		

\*One way ANOVA

Table 4.12 shows that there is no significant difference in the level of nurses' attitude regarding the application of nursing process among their different marital status ( $p > 0.05$ ). Also, the table shows that there is no significant difference in the level of nurses' knowledge regarding nursing process among their different marital status ( $p > 0.05$ ).

#### 4.16 Institutional factors which influence and impede the application of nursing process

**Table 4.13: Influencing factors which facilitate the application of nursing process**

No	Influencing factors	Mean	SD	Mean %
1	Recognition of nursing process by hospital administration as a framework of nursing care delivery	2.63	1.00	65.75
2	Support granted by the hospital administration regarding the implementation of nursing process	2.38	1.02	59.50
3	Inclusion of nursing process implementation in the annual performance appraisal	2.29	1.12	57.25
4	Monitoring the implementation of nursing process by the hospital management monitors	2.09	1.19	52.25
5	Hospital supply of relevant tools for the implement nursing process	2.03	1.14	50.75
6	Availability of papers, forma, and nursing process books in the hospital	1.82	1.26	45.50
7	Availability of salary and promotion motivating for those who apply nursing process	1.52	1.22	38.0
8	The nurse/patient ratio is optimal to apply the nursing process	1.15	1.27	28.75
	<b>Total</b>	15.91 <sup>a</sup>	6.61	49.71

<sup>a</sup> Out of 32 (Maximum score)

Table 4.13 illustrates the influencing factors which may facilitates the application of nursing process in the paediatric departments at government hospitals. The table shows that first influencing factor which may influence the application of nursing process is “a recognition of nursing process by hospital administration as a framework of nursing care delivery”, with a mean percentage 65.75%, followed by “Support granted by the hospital administration regarding the implementation of nursing process” with a mean percentage

59.50%. On the other hand, the least influencing factor may facilitates the application of nursing process in the paediatric departments at government hospitals is “The nurse/patient ratio is optimal to apply the nursing process” with a mean percentage of 28.75%.

**Table 4.14: Obstacles which impede the application of nursing process**

No	Obstacles	Mean	SD	Mean %
1	Hospital management does not providing necessary facilities for doing the nursing process by the authorities	2.28	1.15	57.0
2	Absence of specific training for applying it by the authorities	2.28	1.18	57.0
3	Absence of format for writing nursing process	2.19	1.27	54.75
4	Absence of follow up by the authorities to apply the nursing process	2.08	1.36	52.0
5	Absence of attention to the importance of nursing process given by authorities	2.07	1.13	51.75
	<b>Total</b>	10.90 <sup>a</sup>	4.68	54.50

<sup>a</sup> Out of 20 (The maximum score)

Table 4.14 illustrates the obstacles factors which may impede the application of nursing process in the paediatric departments at government hospitals. The table shows that first two obstacles which may impede the application of nursing process are “Hospital management does not providing necessary facilities for doing the nursing process by the authorities”, and “the absence of specific training for applying it by the authorities” with a mean percentage 57.0%, followed by “Absence of format for writing nursing process” with a mean percentage 54.75%.

On the other hand, the least obstacle may impede the application of nursing process in the paediatric departments at government hospitals is “Absence of attention to the importance of nursing process given by authorities” with a mean percentage 51.75%

#### 4.17 Differences in the influencing factors and obstacles for the application of nursing process among different hospitals

**Table 4.15: Differences in the influencing factors and obstacles for the application of nursing process among different hospitals**

Variable	N	Mean (SD)	F (df)	P value <sup>a</sup>
<b>Influencing factors</b>				
European Gaza hospital	24	17.45 (4.54)	4.025 (5, 178)	0.002
Alnajjar hospital	17	20.64 (4.59)		
Nasser medical complex	28	17.39 (7.35)		
Al-Aqsa hospital	25	15.92 (6.70)		
Alnasser hospital	72	13.84 (6.80)		
Al-Dorra hospital	18	15.27 (5.73)		
<b>Obstacles</b>				
European Gaza hospital	24	10.04 (4.54)	0.220 (5, 178)	0.953
Alnajjar hospital	17	11.35 (3.80)		
Nasser medical complex	28	11.07 (3.85)		
Al-Aqsa hospital	25	10.72 (5.17)		
Alnasser hospital	72	11.05 (5.10)		
Al-Dorra hospital	18	11.00 (4.82)		

<sup>a</sup>One way ANOVA

Table 4.15 shows that there is a significant difference in the mean of influencing factors among different hospitals ( $p < 0.05$ ). Post hoc analysis was done using Dunnett test and shows that the difference is significant between Alnajjar and Alnasser hospital in favor of

Alnajjar hospital ( $p < 0.05$ ). On the other hand, there is no significant difference in the mean of obstacles among different hospitals ( $p > 0.05$ ).

#### 4.18 Correlation between nurses' knowledge and their attitudes toward the application of nursing process

**Table 4.16: Correlation between nurses' knowledge and their attitudes toward the application of nursing process**

	Level of nurses' attitude and perception	
	<i>r</i>	<i>P</i> value*
Level of nurses' knowledge	0.289	<0.001
Influencing factors	0.229	0.002
Obstacles	-0.040	0.593

\* Pearson correlation

The table shows that there is a weak significant correlation ( $r=0.289$ ) between the level of nurses' attitude toward the application of nursing process, and their knowledge of nursing process ( $p < 0.001$ ). Moreover, the table shows that there is a weak significant correlation ( $r=0.229$ ) between the nurses' attitude toward the application of nursing process, and the influencing factors ( $p < 0.01$ ). On the other hand, there is no significant correlation between the nurses' attitude and perception toward the application of nursing process, and the obstacles ( $p > 0.05$ ).

## **4.19 Discussion of the study results**

### **4.19.1 Introduction**

The following paragraphs illustrate the discussion of the study results in all domains of the study results, they include: nurses' attitudes toward and knowledge regarding the application of nursing process, differences in the mean of nurses' attitude and knowledge regarding the application of nursing process with regard to their demographic factors, institutional factors which influence and impede the application of nursing process, and correlation between nurses' knowledge and their attitudes toward the application of nursing process. The current study results are compared to the previous studies, also the personal opinion of the researcher is illustrated based on her experience in the field.

### **4.19.2 Nurses' attitudes and knowledge regarding the application of nursing process**

The study results showed that the mean score of nurses' attitude toward the application of nursing process is 66.71 (66.71%), and the mean score of their knowledge toward the application of nursing process is 6.58 (65.81%). It is clear from these results that the mean of nurses' knowledge is not satisfactory, and this is supported by the following results in the current chapter, in which 46.2% of them are below 70.0%. This could be attributed to the lack of training in this field, since 50.0% of the nurses in this study received such training and only 50.0% of them stated that the training enables them to practice nursing process competently

More importantly, by looking to the mean of attitudes and the mean score of knowledge; it is clear that the nurses' attitude in the current study is influenced by their knowledge, and this result is supported at the end of the results in the current chapter, in which the nurses' knowledge was significantly correlated to the nurses' attitude. These results are not consistent with the results of the study of Abdelkader and Othman (2017) which revealed

that 88.0% of the nurses had average knowledge score, and only 4.0% of them had poor knowledge score. On the other hand, this result is consistent with the result of Yeboa et al. (2017) which revealed that the nurses have limited knowledge in nursing process due to the absence of training from the experienced nurses within the hospital.

Moreover, the inconsistency of the current study results has been noted within the study of Dennis et al. (2015), which revealed that 43.3% of the nurses rated their understanding as being good, 35.0% rated average, 17.2% rated very good, 3.7 % rated poor while 0.7 rated very poor. This inconsistency could be attributed to the difference in the study sample, lack of training in the governmental hospitals regarding nursing process, and the absence of application of it all over the years.

#### **4.19.3 Differences in the mean of nurses' attitude and knowledge regarding the application of nursing process with regard to their demographic factors**

The study results revealed that there are no significant differences in the mean level of attitude regarding nursing process between male and female nurses, and there are no significant differences in the mean level of knowledge regarding nursing process between male and female nurses. Meaning that male and female nurses in the paediatric wards do not have differences in their attitudinal and knowledge score regarding nursing process. This could be attributed to the nature of nursing process, since it is not applied in the governmental hospitals and within the ministry of health; the issue could be institutional or may interfere with policy itself, not gender differences, thus gender differences does not have an effect in the issue of application of nursing process.

Also, there are no significant differences in the level of attitude among different educational levels of the nurses, and there are no significant differences in the level of knowledge among different educational levels of them. Based on the researcher's



knowledge and her past experience in the paediatric wards, there were no job description within governmental hospitals; job description can alter and modify the attitude of the employee, absence of such description is an crucial issue in nursing work, it might affect the nurses' attitude and can create no constant attitude, also because all of the nurses are working the same regardless of their educational levels; thus the attitude may not change.

Also, the absence of differences in the nurses' knowledge with regard to their educational levels could be attributed to the fact that they are far from nursing as a science along time ago, and the issue of nursing process need to be applied periodically for the purpose of recalling information.

On the other hand, there are significant differences in the level of attitude among different hospitals in favour to those who are working in Al-Aqsa hospital. Moreover, there are significant differences in the level of knowledge regarding nursing process among different hospitals. This could be attributed to the nature of nursing study in the Gaza Strip in which all of the nurses are studying the same curriculum, they receive the same training, thus the issue became a matter of scientific culture. Also, it could be attributed to the absence of active in-service education and training in the governmental hospitals regarding the issue of nursing process.

Additionally, there are no significant differences in the level of nurses' attitude and knowledge among their different years of experience, the researcher attributed this result to the fact that the nursing process has not ever been applied in the ministry of health' since the knowledge and experience are closed together, that's why the nurses' years of experience were not considered as issue to affect the nurses' attitudes.

The study results revealed that there is a significant difference in the level of nurses' attitude among their different age groups in favour to those who are below 30 years old.

Also, there is no significant difference in the level of nurses' knowledge among their different age groups. This result is supported by the following result in this chapter in which there is a significant difference in the mean level of nurses' attitude among their different level of income in favour to those who have average income level  $\leq 1000$  Shekel. This could be attributed to the ages of the nurses in this group, in which they are below 30 years, since the majority of this nurses in this group are young adults, and they have been employed since recent years, they are not so far from what have been studied, they may still have accepted or positive attitude toward the application of nursing process more than those who are older, in which the older nurses may have burnout and do not have the accepted attitude toward change, thus it is difficult for them to use the nursing process after ten years or later.

Additionally, the absence of significant difference was noted also in the level of nurses' attitude and knowledge with regard to marital status. The researcher attributes the absence of these differences to the fact that the nursing process is a professional issue, thus the social attributes do not have an effect on the application, and this is what have been proved and supported by the institutional obstacles mentioned in this chapter which impede the application of nursing process.

Inconsistency was noted between the current study results and the study of Hagos et al. (2014) which revealed that the knowledge of the nurses on nursing process has a significant relationship with their educational status., Also, the current study study results are not consistent with the results of Mahmoud and Bayoumy (2014) which revealed that the nurses' years of experience and academic qualification have significant impact on the application of nursing process, nurses' academic qualification has a direct statistically significant relationship with the knowledge of nurses on nursing process, and the consistency was observed only within the variable "nurses' age", in which their study

results revealed that the nurses' age had a significant impact on the application of nursing process. On the other hand, the current study results are consistent with the results of Abdelkader and Othman (2017) in terms of "differences among different age groups", which revealed a significant association between knowledge score of nursing process and age group of nurses, but there was inconsistency noted between the same study and the current study in term of gender, in which their study revealed that there was a significant association between knowledge score and years of experience of the nurses.

#### **4.19.4 Institutional factors which influence and impede the application of nursing process**

The study results revealed that first influencing factor which may influence the application of nursing process is "a recognition of nursing process by hospital administration as a framework of nursing care delivery", followed by "Support granted by the hospital administration regarding the implementation of nursing process", and the least influencing factor may facilitates the application of nursing process in the pediatric departments at government hospitals is "The nurse/patient ratio is optimal to apply the nursing process". However the above mentioned influencing factors do not have high percentages, meaning that these factors are not applied comprehensively in the all of included hospitals within the current study. All of the above mentioned factors did not reach the satisfactory limit, they are all below 70.0%, we can say that the governmental hospitals as "institutions" have the major concern and have the power to influence to application of nursing process.

Looking to the least factor which is "The nurse/patient ratio is optimal to apply the nursing process", this factor reflects the reality situation in the governmental hospitals, since the nursing process require from a nurse to implement a care within an evidence-based practice; the issue which demand a time to be applied, thus the nurse-patient ratio

especially in the paediatric wards and in the governmental hospitals in general is not optimal to have good time to implement such framework. On the other hand, the study results revealed that the first two obstacles which may impede the application of nursing process are “Hospital management does not providing necessary facilities for doing the nursing process by the authorities”, and “the absence of specific training for applying it by the authorities”, followed by “Absence of format for writing nursing process”.

All of the above mentioned factors are considered as the major ones which may impede the application of nursing process. Absence of facilities, needed forms, and attention; all of these are considered the basic needs to apply and use the nursing process. To the best of researcher’s knowledge, these factors are not available with paediatric wards at governmental hospitals. These results are consistent with the results of Yeboa et al. (2017), which revealed that the nursing- process, which is supposed to be part of the admission papers for each patient, was absent from the ward.

These results are consistent with the results of Akbari and Shamsi (2011), which revealed that the institutional factors that impede the application of nursing process include shortage of resources, lack of knowledge, high patient nurse ratio/work load, and lack of training and motivating factors affected the application of the nursing process. Moreover, the study of Mahmoud and Bayoumy (2014) revealed some of what has been revealed in the current study such as the absence of poor equipment, staff shortage, absence of nurses’ training, and unattractive service conditions can as well lead to non-application of nursing process.

The current study results are also consistent with the results of Hagos et al. (2014) which revealed that the nurses who have been included in their study said that they did not use the nursing process during provision of care to their patients due to the problem of patient ratio that was not optimal to apply the nursing process. Moreover, there are some of

inconsistency between the current study results and the results of Mahmoud and Bayoumy (2014) in Saudi Arabia which revealed that the institutional factors that hindering the application of nursing process include work, resources and management, ranked the highest predictive factor in the use of nursing process.

More importantly, the institutional factors were partially correlated with the application of nursing process in the study of Adeyemo and Olaogun (2013). On the other hand, the current study results are not consistent with the results of Olaogun, et al. (2011) which revealed that the institutional factors does not pose a barrier to the use of nursing process.

The current study results also revealed that there is a significant difference in the mean of influencing factors among different hospitals in favor of Alnajjar hospital and there is no significant difference in the mean of influencing factors among different hospitals. These results could be attributed to the size of hospital; since the hospitals which have more workload and huge number of patients; may face difficulties to influence the application of nursing process, locking at Alnajjar hospital; it does not have a workload and average number of patients like other hospitals included in the current study, thus this hospital has the highest mean of influencing factors to apply the nursing process.

#### **4.19.5 Correlation between nurses' knowledge and their attitudes toward the application of nursing process**

Lastly, the current study results revealed that there is a weak significant correlation (between the level of nurses' attitude and perception toward the application of nursing process, and their knowledge of nursing process. The presence of significant ration in this result could be attributed to the fact that the Pearson's attitude towards something in influenced by his / her knowledge in that issue, and this is supported in the previously mentioned results, in which the mean percentage of nurses attitudes is 66.71%, and the

mean percentage of nurses knowledge is 65.81%. Looking at the two means; they are closed together, thus we can say that the nurses knowledge in the current study affect their attitudes toward the application of nursing process within the same direction.

## **Chapter Five**

### **Conclusion and Recommendations**

#### **5.1 Conclusion**

The main aim of this study was to assess the influencing factors which promote, and the obstacles which impede the application of nursing process in paediatric departments at Governmental Hospitals in the Gaza Strip. A cross-sectional design was applied in the current study on a census sample consisted of all the nurses who are working in the pediatric departments at governmental hospitals in the Gaza Strip, the total number of nurses who responded to the study questionnaire is 184.

The study results revealed that the mean percentage of nurses' attitude and knowledge toward the application of nursing process is 66.71% and 65.81 respectively. Also, there are no significant differences in the level of attitude regarding nursing process with regard to nurses' gender, educational levels, workplace (hospital). While the significant difference was noted with regard to the age groups of nurses and their level of income. The study results revealed also that there are no significant differences in the level of nurses' knowledge with regard to their demographic factors.

Moreover, the first influencing factor which may facilitates the application of nursing process include “ recognition of nursing process by the hospital administration as a framework of nursing care delivery”, and the first obstacle which may impede the application of nursing process is that “the hospital management does not providing necessary facilities for doing the nursing process by the authorities”. More importantly, there is a weak significant correlation between the level of nurses' attitude and perception toward the application of nursing process, and their knowledge of nursing process.

## **5.2 Recommendations**

The researcher recommends conducting special workshop with key persons at the ministry of health and nursing unit to activate the application of nursing process in the paediatric departments as a pilot. Also, conducting training regarding nursing process among all nurses and the head nurses through continuous in-service education, on job training and mentorship programs. Hospitals' management should recognize the nursing process as a framework of nursing care delivery, hospitals' management should also reinforce the mechanisms to ensure availability of resources needed to implement the nursing process such as supplies, necessary facilities, and nursing process forms. Ministry of health also should seriously monitor the application of nursing process. Moreover, different types of motivators from the hospital management especially nursing administration; are recommended to encourage the nurses to apply nursing process.

## **5.3 Recommendations for future research**

This study is the first one to be conducted in the Gaza Strip with regard to nursing process. Future studies are required to address the implementation of nursing process in the governmental hospitals. Further studies are needed to address more factors which are responsible for influencing and the factors which are responsible for impeding the implementation of nursing process in the governmental hospitals in the Gaza Strip. Also, further quasi-experimental studies are needed to test the implementation of nursing process and to evaluate its effectiveness.



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## Appendices

### Appendix 1: Approval from Helsinki



**المجلس الفلسطيني للبحوث الصحي**  
**Palestinian Health Research Council**

تعزيز النظام الصحي الفلسطيني من خلال مأسسة استخدام المعلومات البحثية في صنع القرار  
Developing the Palestinian health system through institutionalizing the use of information in decision making

**Helsinki Committee**  
**For Ethical Approval**

**Date: 05/02/2018**                      **Number: PHRC/HC/310/18**

**Name: WALAA F. ABUMOUSA**                      الاسم:

We would like to inform you that the committee had discussed the proposal of your study about:                      نفيديكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:

**The Application of Nursing Process in Pediatric Departments at Governmental Hospitals in the Gaza Strip: Influencing Factors and Obstacles.**

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/310/18 in its meeting on 05/02/2018                      و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

**Signature**

**Member**                      **Member**

*Nahdallah*                      *د. ناهد سوسية*

**Chairman**                      *5/2/2018*

*5/2/2018*

**General Conditions:-**

1. Valid for 2 years from the date of approval.
2. It is necessary to notify the committee of any change in the approved study protocol.
3. The committee appreciates receiving a copy of your final research when completed.

**Specific Conditions:-**

**E-Mail: pal.phrc@gmail.com**

Gaza - Palestine                      غزة - فلسطين  
شارع النصر - مفترق العيون

## Appendix 2: Approval from MoH

State of Palestine  
Ministry of health



دولة فلسطين  
وزارة الصحة

التاريخ: 23/04/2018  
رقم المراسلة 211591

السيد: رامي عيد سليمان العبادله المحترم

مدير عام بالوزارة/الإدارة العامة لتنمية القوى البشرية - /وزارة الصحة

السلام عليكم...

### الموضوع/ تسهيل مهمة الباحثة//ولاء أبو موسى

// التفاصيل

بخصوص الموضوع أعلاه، يرجى تسهيل مهمة الباحثة/ ولاء فتحى أبو موسى  
الملتحة ببرنامج ماجستير التمريض - تخصص صحة الأم والطفل- جامعة القدس أبوديس في إجراء بحث بعنوان:-  
“The Application of Nursing Process in Pediatric Departments at Governmental Hospitals in  
the Gaza Strip: Influencing Factors and Obstacles”  
حيث الباحثة بحاجة لتعبئة استبانة من عدد من الممرضين العاملين في أقسام الأطفال في مستشفيات قطاع غزة الحكومية، بما لا  
يتعارض مع مصلحة العمل وضمن أخلاقيات البحث العلمي، ودون تحمل الوزارة أي أعباء أو مسئولية.  
وتفضلوا بقبول التحية والتقدير،،،  
ملاحظة/ البحث حصل على موافقة لجنة أخلاقيات البحث الصحي  
ملاحظة / تسهيل المهمة الخاص بالدراسة أعلاه صالح لمدة 6 شهر من تاريخه.

محمد إبراهيم محمد السرساوي  
مدير دائرة/الإدارة العامة لتنمية القوى البشرية -





### Appendix 3: Questionnaire

أخي الحكيم .. أختي الحكيمة  
السلام عليكم ورحمة الله وبركاته  
تقوم الباحثة الموقعة أدناه بإعداد رسالة ماجستير بعنوان

#### The Application of Nursing Process in Pediatric Departments at Governmental Hospitals in the Gaza Strip: Influencing Factors and Obstacles

تطبيق نموذج العملية التمريضية في أقسام الأطفال بمحافظات غزة: دراسة العوامل المعززة والمعيقة  
إن هذا البحث يشكل جزء ضروري من دراستي كمتطلب أساسي للتخرج من جامعة القدس تخصص  
ماجستير تمريض الأطفال - وقد تم اختياركم ضمن مجموعة المشاركين في هذه الدراسة للإجابة  
على العبارات الواردة فيها.

إذا كنت/ي توافق/ين على المشاركة في هذه الدراسة، يرجى التكرم بقراءة العبارات التالية بدقة والإجابة  
عنها بموضوعية لما في ذلك من أثر كبير على صحة النتائج والتوصيات التي سوف تتوصل  
إليها الباحثة مع التأكيد بأن هذه البيانات سوف تستخدم لأغراض البحث العلمي فقط، وسيتم  
التعامل معها بسرية تامة، شاكرة لكم تعاونكم ولطفكم.

لا أوافق

أوافق

الباحثة: ولاء فتحي أبو موسى

تطبيق نموذج الرعاية التمريضية في أقسام الأطفال بمحافظة غزة: دراسة العوامل المعززة والمعيقة

الرقم التسلسلي .....

الجزء الأول: البيانات الأساسية				
الجنس		<input type="checkbox"/> ذكر	<input type="checkbox"/> أنثى	
السكن .....				
الحالة الاجتماعية		<input type="checkbox"/> أعزب/عزباء	<input type="checkbox"/> متزوج/ة	<input type="checkbox"/> مطلق/ة
اسم المستشفى .....				
1. المؤهل العلمي		<input type="checkbox"/> دبلوم	<input type="checkbox"/> بكالوريوس	<input type="checkbox"/> دبلوم عالي
2. العمر		سنة .....		
3. سنوات الخبرة		سنة .....		
4. معدل الدخل		شيكل شهريا .....		

الجزء الثاني: ادراك الممرضين واتجاهاتهم نحو تطبيق نموذج الرعاية التمريضية					
Second part: Perception and attitude of the nurses regarding the application of nursing process					
Statement	موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة
1. I like the concept of Nursing process (NP) أحب مفهوم نموذج الرعاية التمريضية	4	3	2	1	0
2. Identification of patients priority is easy using NP سنتكون تحديد اولويات المريض سهلة باستخدام نموذج الرعاية التمريضية	4	3	2	1	0
3. The nursing process works well in practice يلعب نموذج الرعاية التمريضية دورا هاما في الممارسة العملية مع المريض	4	3	2	1	0
4. NP enables nurse to provide quality patient centered care يمكن نموذج الرعاية التمريضية لتقديم خدمة تمريضية ذات جودة عالية	4	3	2	1	0
5. The NP can be implemented for every	4	3	2	1	0

patient					
يمكن استخدام نموذج الرعاية التمريضية لأي مريض					
6. The nursing process is tedious	4	3	2	1	0
نموذج خطة الرعاية التمريضية ممل ومضجر					
7. I like the aim of nursing process	4	3	2	1	0
أحب الهدف الأساسي من نموذج خطة الرعاية التمريضية					
8. I am convinced the NP will work if applied in patient care	4	3	2	1	0
أنا مقتنع بأن نموذج خطة الرعاية التمريضية يعمل بشكل جيد إذا تم تطبيقه في رعاية المريض.					
9. The nursing process is an elaborated Kardex system	4	3	2	1	0
نموذج خطة الرعاية التمريضية عبارة عن نظام كارديكس مفصل					
10. The nursing process should be used by BSc and above nurses only	4	3	2	1	0
يجب أن يتم استخدام نموذج خطة الرعاية التمريضية بواسطة الممرضين حاملي درجة البكالوريوس فما فوق فقط					
11. The nursing process can be used in any settings	4	3	2	1	0
يُمكن استخدام نموذج خطة الرعاية التمريضية في أي قسم					
12. There is no enough time to apply NP during patient care	4	3	2	1	0
لا يتوفر الوقت لاستخدام نموذج خطة الرعاية التمريضية مع المريض					
13. Nursing process is a waste of time	4	3	2	1	0
يعتبر نموذج خطة الرعاية التمريضية مضيعة للوقت					
14. The NP simplifies the awareness of patient's needs	4	3	2	1	0
يبسط نموذج خطة الرعاية التمريضية الوعي حول احتياجات المرضى					
15. Priorities of care are easy to identify using NP	4	3	2	1	0
يمكن معرفة أولويات الرعاية المقدمة للمريض بشكل أسهل عند استخدام نموذج خطة الرعاية التمريضية					
16. I am fed up with hearing about the nursing process	4	3	2	1	0
لقد سئمت من السماع عن نموذج خطة الرعاية التمريضية					

17. The nursing process involves too much of paper work يتضمن نموذج خطة الرعاية التمريضية أوراق كثيرة خلال العمل	4	3	2	1	0
18. NP enable nurses to provide quality of nursing care to patients يمكن نموذج خطة الرعاية التمريضية من تقديم رعاية تمريضية ذات جودة عالية	4	3	2	1	0
19. I am willing to apply nursing process during patient care أنا على استعداد لتطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
20. I think introduction of NP will cause a problem باعقادي فإن تطبيق نموذج خطة الرعاية التمريضية يخلق مشكلة	4	3	2	1	0
21. I think that the patient will not like to be cared for using the NP أعتقد أن المريض لا يحب تقديم الرعاية له باستخدام نموذج خطة الرعاية التمريضية	4	3	2	1	0
22. I think that the nursing staff have no willingness to apply NP أعتقد أن الممرضين لا يوجد لديهم الاستعداد لتطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
23. I think that other staff will never accept the nursing process أعتقد أن الطواقم الطبية الأخرى بالمستشفى لن يوافقوا على استخدام نموذج خطة الرعاية التمريضية	4	3	2	1	0
24. Formulating nursing diagnosis should not be mandatory ليس من الضروري صياغة تشخيص تمريضي خلال تقديم الرعاية للمريض	4	3	2	1	0
25. Nursing care plan should be drawn for the very sick patients only ينبغي تطبيق نموذج خطة الرعاية التمريضية على المرضى ذوي الوضع الصحي المتدني جدا.	4	3	2	1	0

الجزء الثالث: العوامل المؤسسية التي تلعب دور هام في تطبيق خطة الرعاية التمريضية

Third part: Institutional factors which affect the application of nursing process

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
26. Hospital administration recognizes nursing process as a framework of nursing care delivery? تعترف إدارة المستشفى بأن نموذج خطة الرعاية التمريضية يعتبر إطار فعلي لتقديم الرعاية التمريضية	4	3	2	1	0
27. Hospital administration supports the implementation of NP? تدعم إدارة المستشفى تطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
28. Hospital management monitors implementation of nursing process? تراقب إدارة المستشفى تطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
29. NP implementation is part of your annual performance appraisal objectives يعتبر تطبيق نموذج خطة الرعاية التمريضية جزءاً من تقييمك السنوي بالمستشفى	4	3	2	1	0
30. The hospital supplies you with the relevant tools to enable you implement NP? تزود إدارة المستشفى الممرضين بالأدوات المتعلقة لتطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
31. The nurse/patient ratio is optimal to apply the nursing process يعتبر عدد الممرضين بالنسبة لعدد المرضى كافياً لتطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
32. No format for writing Nursing process لا يوجد أي نموذج لتطبيق خطة الرعاية التمريضية	4	3	2	1	0
33. No follow up by the authorities to apply the NP لا يوجد متابعة من قبل الإدارة بخصوص تطبيق خطة الرعاية التمريضية	4	3	2	1	0
34. Hospital management does not providing necessary facilities for	4	3	2	1	0

doing the nursing process by the authorities لا يتم توفير التسهيلات اللازمة من قبل الإدارة لتطبيق نموذج خطة الرعاية التمريضية					
35. No attention to its importance by authorities لا تلقي الإدارة أي اهتماماً حول مدى أهمية تطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
36. No specific training for applying it by the authorities لا يتوفر أي تدريب مخصص حول تطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
37. There is salary and promotion motivating for application of NP يوجد محفزات لتطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0
38. Nursing process tools (papers and nursing care plans books) are available in the hospital. يتوفر بالمستشفى النماذج الورقية المخصصة لتطبيق نموذج خطة الرعاية التمريضية	4	3	2	1	0

الجزء الرابع: المعرفة الخاصة بالتمريض حول تطبيق نموذج خطة الرعاية التمريضية

#### Fourth part: Nurses' knowledge regarding the nursing process

39. How do you rate your understanding of NP? كيف تقيم نفسك حول فهم نموذج خطة الرعاية التمريضية				
<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Average	<input type="checkbox"/> Poor	<input type="checkbox"/> Very poor
40. Have you ever been trained on NP? هل تلقيت تدريباً حول تطبيق نموذج خطة الرعاية التمريضية				<input type="checkbox"/> Yes <input type="checkbox"/> No
41. If <u>yes</u> where? (Where applicable tick more than once) إذا كانت الإجابة بـ "نعم"، أين تلقيت هذا التدريب (بإمكانك اختيار أكثر من إجابة)				
<input type="checkbox"/> College الكلية/الجامعة	<input type="checkbox"/> On job training التعليم المستمر بالمستشفى	<input type="checkbox"/> MoH training تدريب من قبل وزارة الصحة		
42. If <u>yes</u> , does the NP training you have acquired enable you to practice NP competently? هل منحك التدريب الذي تلقيته الكفاءة لتطبيق نموذج خطة الرعاية التمريضية				

<input type="checkbox"/> لا <input type="checkbox"/> نعم		
<b>43. The first step in the nursing process is?</b>		
<input type="checkbox"/> Collecting subjective & objective data		
<input type="checkbox"/> Indicating the activities to be done		
<input type="checkbox"/> Evaluating what has been done for the patient		
<input type="checkbox"/> Directly intervening the problem		
44. Select from the given option <u>that is not a component</u> of nursing process		
أي من الإجابات التالية لا يعتبر من مكونات خطة الرعاية التمريضية		
<input type="checkbox"/> Assessment	<input type="checkbox"/> Implementation	<input type="checkbox"/> Planning
<input type="checkbox"/> Evaluation	<input type="checkbox"/> Evidenced based practice	<input type="checkbox"/> Nursing diagnosis
<b>45. Once a nurse assesses a client's condition and identifies appropriate nursing diagnoses</b>		
<input type="checkbox"/> Plan is developed for nursing care		
<input type="checkbox"/> Physical assessment begins		
<input type="checkbox"/> Review of the assessment is conducted with other team		
<input type="checkbox"/> List of priorities is determined		

#### Appendix 4: Control panel

No	Name	Affiliation
1	Dr. Motasem Salah	Ministry of health
2	Dr. Ali Alkhateeb	University College of Applied Sciences
3	Dr. Yousef Aljeesh	Islamic University of Gaza
4	Dr. Ashraf Aljedi	Islamic University of Gaza
5	Dr. Mohammad Aljerjawi	Palestine College of Nursing



## عنوان الدراسة: تطبيق نموذج العملية التمريضية في أقسام الأطفال في مستشفيات قطاع غزة الحكومية: العوامل المعززة والمعيقة

إعداد: ولاء فتحي أبو موسى

إشراف: د.سامر خضر النواجحة

### ملخص:

يعتبر مفهوم نموذج الرعاية التمريضية مفهوم عالمي، والذي يُشكل أساس مهنة التمريض، حيث أن استخدامه في المستشفيات لا يزال ضعيفاً على الرغم من كل الجهود التي يبذلها المتخصصون في علوم التمريض لتطبيق استخدامها. لقد هدفت هذه الدراسة إلى تقييم العوامل التي تعزز من استخدام تطبيق هذا النموذج، والعقبات التي تحول دون تطبيقه في أقسام الأطفال في مستشفيات قطاع غزة الحكومية، وقد تكون مجتمع الدراسة من جميع الممرضين العاملين في أقسام الأطفال في مستشفيات قطاع غزة الحكومية والبالغ عددهم 203 ممرض، استجاب منهم للمشاركة في الدراسة 184 ممرض، ما نسبته 90.6%، وقد استخدمت الباحثة الاستبانة كأداة لجمع البيانات، وقد تم استخدام الأساليب الإحصائية مثل النسب المئوية والمتوسط الحسابي، واختبار ت لعينتين مستقلتين، واختبار التباين الأحادي، واختبار بيرسون.

لقد أظهرت نتائج الدراسة أن متوسط نسبة اتجاهات ومعرفة الممرضين نحو استخدام نموذج الرعاية التمريضية في أقسام الأطفال هي 66.71% و 65.81% على التوالي، وقد أظهرت النتائج أيضاً بعدم وجود فروق ذات دلالة إحصائية في اتجاهات الممرضين نحو استخدام نموذج الرعاية التمريضية تعزي إلى متغير الجنس، المستوى التعليمي، مكان العمل (المستشفى) لديهم، بينما كان هناك فروق ذات دلالة إحصائية في اتجاهات الممرضين نحو استخدام نموذج الرعاية التمريضية تعزي إلى متغير العمر والراتب الشهري، أيضاً توجد علاقة ارتباطية ضعيفة بين مستوى اتجاهات الممرضين نحو تطبيق نموذج الرعاية التمريضية ومعرفتهم الخاصة به، من جهة أخرى فقد أظهرت نتائج الدراسة عدم وجود فروق ذات دلالة إحصائية في معرفة الممرضين حول استخدام نموذج الرعاية التمريضية تعزي إلى المتغيرات الديموغرافية (الأساسية) للممرضين، وقد أظهرت النتائج أيضاً أن العامل الأول المؤثر والذي قد يسهل تطبيق هذا النموذج هو "اعتراف إدارة المستشفى بهذا النموذج كإطار لتقديم الرعاية التمريضية"، في حين أن المعيق الأول لتطبيق هذا النموذج هو "أن إدارة المستشفى لا تقدم التسهيلات اللازمة للقيام بتطبيق هذا النموذج".

خلصت نتائج الدراسة إلى أن هناك ضعف عام في اتجاهات ومعرفة الممرضين نحو استخدام نموذج الرعاية التمريضية في أقسام الأطفال في مستشفيات قطاع غزة الحكومية وأن هناك عوامل تحول دون تطبيقه، ومن هذا المنطلق فقد أوصت الباحثة بضرورة إجراء ورش عمل خاصة مع الأشخاص القياديين في وزارة الصحة ووحدة التمريض لتفعيل تطبيق نموذج الرعاية التمريضية في أقسام الأطفال كإطار عام للرعاية التمريضية، علاوة على ذلك فقد أوصت الباحثة بضرورة إجراء التدريب فيما يتعلق باستخدام هذا النموذج من قبل التمريض من خلال التعليم المستمر والتدريب أثناء العمل، من جهة أخرى أوصت الباحثة أيضا بأن تدرك إدارة المستشفيات باستخدام هذا النموذج كإطار لتقديم الرعاية التمريضية، كما ينبغي عليها أن تعزز الآليات اللازمة لضمان وجود التسهيلات لتطبيق هذا النموذج في المستشفيات.