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Knowledge, Attitude and Practice among Nurses Regarding Pediatric Pain Management at Southern Governmental Hospitals in Gaza Strip.

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Dedication

To my Parents, my light and moral compass.

To my wife whose support made this research possible.

My inspiration, my kids.

To the Palestinian prisoners in Israel‘s jails.

To my colleagues.

And finally, to those who dedicated their lives so that we lead a better life, to my teachers.

Atef Salem Abu Amra

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 thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed ……

Atef Salem Abu Amra

Date: December / 2018

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Atef Salem Abu Amra

Abstract

The under-treatment of pain is a problematic area for hospitalized pediatric patients worldwide, yet it is poorly assessed and managed. Nurses have a vital role in implementing pain management effectively; therefore inadequate knowledge and negative attitude remain a major barrier to achieving effective pain management. The aim of this study was to examine the knowledge, attitudes and practice of nurses regarding children pain management. A descriptive cross sectional study design was used with a convenience sample consisted of 87 nurses who currently working on pediatric departments at three governmental hospitals in southern Gaza strip (European Gaza Hospital, Nasser complex and Najjar hospital). A survey questionnaire was used to collect data regarding nurses knowledge, attitudes, and pain management practices from the following pediatric departments (medical, surgical and emergency). A pilot study was carried out on (10%) of nurses who were included from the sample. The reliability of instrument was demonstrated by a Cranach's alpha 0.71 for knowledge, 0.75 for attitude and 0.91 for practice. The data collected were analyzed by using frequencies, percentages, mean, standard deviation, One-Way ANOVA, One sample t test and Pearson correlation with statistical significance $p < .05$ at 95% confidence interval. The rate of retuned questionnaire was 96.6%. The results showed that nurses had moderate knowledge level with mean knowledge score of 69.1 and low attitude level with a mean attitude score of 38.3, and also a moderate level of practice regarding pediatric pain management with mean practice score of 63.7. Knowledge, attitude and practice of pain management were not associated with socio-demographic variable such as level of education, age, gender, working departments, experience and current position, therefore, the study recommended that implement a continuous professional education program for nurses on pediatric pain management in hospitals.

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List of abbreviations

AMSN	Academy Medical Surgical Nursing
ANOVA	Analysis of Variance
APS	American Pain Society
EGH	European Gaza Hospital
GS	Gaza Strip
IASP	International Association for the Study of Pain
KAP	Knowledge, Attitude and Practice
MOH	Ministry of Health
NANDA	North American Nursing Diagnosis Association
NIPS	Neonatal Infant Pain Scale
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PCBS	Palestinian Central Bureau of Statistics
PHC	Primary Health Care
PNKAS	Pediatric Nurses Knowledge and Attitudes Survey
PRN	pro re nata
RANO	Registered Nurses Association of Ontario
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
UNRWA	United Nations Relief and Work Agency
USA	United States of America
WB	West Bank
WHO	World Health Organization

Chapter One

Introduction

1.1 Background

Pain is the most disturbing and annoying symptom experienced by children, yet it is poorly managed. Despite having many researches and scientific advancement in pain management over the years, inadequate knowledge and negative attitude remain a major barrier to achieving effective pain management (Manwere, et al., 2015). Relieving children pain has perceived as a crucial public health issue that needs immediate global attention, since failing to manage pain can lead to economic and human burden on patients, their families, and society (Al Omari, 2015).

Knowledge deficit about pain management is not uncommon among nurses. It is estimated that around 50% of nurses reported lack of knowledge in relation to pain assessment and management (Samarkandi, 2018). Studies had also shown that nurses bear misconceptions and myths about pain that impede proper pain management (Nuseir, et al., 2016).

According to the International Association for the Study of Pain (IASP) pain is an unpleasant sensory and emotional experience associated with actual and potential tissue damage or described in terms of such damage. This definition emphasizes both the physical and emotional nature of pain (Lissauer, et al., 2017). World Health Organization (WHO) also defined the pain as a multidimensional phenomenon with sensory, physiological, cognitive, affective, behavioral and spiritual components. Emotions, behavioral responses to pain, beliefs, attitudes, spiritual and cultural attitudes about pain and pain control, all alter the way that pain is experienced by modifying the transmission of unpleasant stimuli to the brain (WHO, 2012).

Pain is a major source of distress for children and their families as well as health care providers, children may experience pain as a result of surgery, injuries, acute or chronic illnesses and medical or surgical procedures. It can lead to serious physical and emotional consequences such as increased oxygen consumption and alterations in blood glucose metabolism. In addition, the experience of untreated pain early in life may lead to long term physiologic, psychological and behavioral consequences for the child (Gadallah, et al., 2017).

There are many possible barriers to effective pain management among nurses, misconceptions, myths and negative attitudes about pain and pharmacological pain treatment particularly fear of opioids addiction as well as serious adverse effects like respiratory depression are blamed for pain under treatment. In addition lack of knowledge about dealing with special groups of patients such as the very young children led to under treatment or even no treatment of pain in such cases in a number of settings and diseases (Nuseir, et al., 2016).

In 1995, the American Pain Society (APS) labeled pain "the fifth vital sign." The APS goal was to encourage health care professionals to assess pain every time that temperature, pulse, respirations, and blood pressure are assessed and to institute measures to manage the pain (Ricci, et al., 2013). Pain is a subjective experience and no objective tests exist to measure it (Hennessee, 2012). Pediatric patients experience pain which is more difficult to assess and treat relatively to adults. Evidence demonstrates that controlling pain in the pediatrics age period is beneficial, improving physiologic, behavioral, and hormonal outcomes. Multiple validated scoring systems exist to assess pain in pediatrics; however, there is no standardized or universal approach for pain management (Kahsay, 2017).

An important responsibility of nurses who care for children is eliminating pain and suffering when possible (Subhashini. et al., 2009), which are recognized as human rights by several organizations, especially WHO and IASP (linhares, et al., 2014). Nurses who possess a strong foundation in pain management and who can provide individual care to the patients with the proper attitude can make an important effect in pain management (Yava, et al., 2013)

Pain management represents a multi-professional area where nurses play a vital role (Mazilu., et al, 2017). The role of the nurse in pain management encompasses the entire nursing process, the nurse assesses for the presence of pain, plans pharmacological and non-pharmacological pain management strategies with the medical team, implements the plan, and evaluates the effectiveness of the interventions (Stanley & Pollard, 2013).

Pharmacologic pain management is used to relieve pain by methods of medication, while non-pharmacological pain management is a method which used other methods to manage pain with exemption of drugs (Purity & Bunmi, 2014). Two categories of non-pharmacological interventions are generally popular in the pain management of children in hospital settings: physical intervention e.g. massage and cognitive intervention e.g. imagery, music and distraction. Non pharmacologic interventions are effective because they require nurses to interact with patients in a manner that includes offering hope of relief, establishing emphatic relationship and spending time working directly with the patient (Madenski, 2014).

Failure in pain management results in patients anxiety, reduced communication, sleep disturbances, impaired mobility, loss of appetite, restless, decreased quality of life, and high costs of healthcare provision and hospitalization, the long-term consequences of pain in children include predicted fear of future procedures due to previous traumatic experiences, sensitivity to pain in the future due to changes in the nervous system in response to pain, reduced effectiveness of opioids, difficulty in understanding the procedures, and needle phobia pain (Aziznejadroshan, et al., 2015).

1.2 Problem statement

Despite recent advances in pain management, uncontrolled pain remains a serious health issue. Nurses related barriers as numerous misconception such (children do not feel pain), insufficient knowledge among nurses, inadequate application of knowledge and personal attitude of nurses about the meaning of pain in the child, contribute to the lack of effective pain management. Nursing research examining the nurses knowledge, attitudes and practice regarding pediatric pain management is limited in Palestine especially in Gaza. More research is needed to evaluate if nurses are providing optimal pain management for their patients and if they have the necessary knowledge and attitudes to do so. Nurses also need knowledge of research and recommendations regarding pediatric pain management. This knowledge can facilitate nursing management of the unpleasant, painful stimuli which can lead to healthier outcomes for the children. More information is needed to clarify the knowledge that exists and to bridge the gap between research findings and nursing practice in order to improve the care of children experiencing pain.

1.3 Significance of the study

The researcher noticed the problem from clinical experience and review international pain articles and reports, the researcher also noticed factors that prompted attention include the high prevalence of pain, continuing evidence that pain is undertreated, a growing awareness of the adverse consequences of inadequately managed pain and significant factor is limited nursing research examining the nurses knowledge, attitudes and practice regarding pediatric pain management in Palestine especially in Gaza Strip.

While the literature review highlights the fact that the misconceptions regarding pain in children are widespread, there have been no studies carried out in our country to capture prevailing pain management knowledge, attitudes and practice in children. At present,

there is no information regarding this subject matter. There is a vital need for better understanding of the factors that influence our ability to achieve optimal pain management for children. Thus a study on knowledge, attitudes and practice will help identify knowledge deficits regarding currently accepted principles of pain management practice as well as attitudes that could interfere with optimal care. The study was anticipated to increase awareness that pain management should be seen as a priority in health care provision and mandate the need for educational interventions and the distribution of protocols.

1.4 Purpose of the study

The purpose of this study was to examine the current knowledge, attitudes and practice (KAP) among nurses regarding pain management in children.

1.4.1. Specific objectives:

1. To evaluate nurses knowledge regarding pain management.
2. To explore nurses attitude regarding pain management.
3. To evaluate nurses current practices regarding pain management.
4. To investigate the relationship between nurses sex, age, education level, years of experience and level of KAP about pain management.
5. To investigate the factors that influence on the nurses KAP.

1.5 Research questions

1. What is the level of the current knowledge regarding pain management among nurses?
2. What is the level of nurses attitude regarding pain management?
3. What is the level of the practice regarding pain management among nurses?

4. Is there a relationship between nurses sex, age, education level, years of experience and level of KAP about pain management?
5. What are the factors that influence on the nurses KAP?

1.6 Demographic characteristics of Palestine (Context of study)

1.6.1 Geography:

Palestine lies within an area of 27,000 Km2, expanding from Ras Al-Nakoura in the north to Rafah in the south. Due to Israeli occupation, Palestinian territory is divided into three areas separated geographically; the West Bank (WB) 5.655 Km2, Gaza Strip (GS) 365 Km2 and East Jerusalem. GS is a narrow zone of land bounded on the south by Egypt, on the west by the Mediterranean Sea, and on the east and north by the occupied territories in 1948 (Palestinian Central Bureau of Statistic – PCBS, 2017).

1.6.2 Population:

The population density (capita/km2) is considered very high 778 in Palestine (506 in WB and 4,986 in GS), with a total population of 4,952 million in WB and GS (3,008 in WB and 1,943 in GS). The total fertility rate is 4.1 births, in WB 3.7 and 4.5 in the GS (PCBS, 2017). Due to blockade of the GS and restriction of movement and trade, a significant increase in poverty rates occurred in GS which reached up to 53% by the end of 2017 (United Nations Office for the Coordination of Humanitarian Affairs – OCHA, 2018).

1.7 Health care system

The Palestinian health system is a complex mix of different sectors. The five major groups of health providers are the Ministry of Health (MoH), Palestinian nongovernmental organization, United Nations Relief and Works Agency for Palestinian Refugees in the Near East (UNRWA), Palestinian military medical service and the private

sector. MoH bears the heaviest burden, as it has the responsibility. UNRWA provides primary care services, only for refugee and purchase secondary care services for the hardship cases. Non-governmental organizations provide primary, secondary and some tertiary services. Private for-profit sector provides the three level of care through a variety of specialized hospitals and investigation centers (MoH, 2017).

1.7.1. Primary health care:

The number of registered Primary Health Care (PHC) centers in Palestine reached to 743 in 2017, of which 583 are in WB and 160 in GS. There are 466 PHC centers belong to the Palestinian MoH, which constitutes 62.7% of total number of PHC centers. The number of PHC centers managed by non-governmental organizations reached to 192, constituting 25.8% of all PHC facilities, while the number of UNRWA centers reached to 65, and military medical centers reached to 20 centers (MoH, 2017).

1.7.2. Hospitals:

The total number of hospitals in Palestine is 81 hospitals, 30 of them in GS. The total number of hospital beds is 6146 beds with rate of 784 populations per bed (784 in GS and 783 in WB). The number of hospitals owned by MoH is 27 hospitals with a capacity of 3325 beds which accounts for 54.1% of total beds in Palestine, of these hospital, there are 13 governmental hospitals in GS with a capacity of 1664 beds. The number of beds allocated for children is 19.3% of the total number of beds in MoH hospitals (260 beds in WB and 381 beds in GS). The number of physicians working in different health facilities of MoH is 2529 physicians, with 5.3 physicians per 10,000 population (4.1 physician per 10,000 populations in WB and 7.0 physician per 10,000 populations in GS), and the number of nurses and midwives working in MoH is 4142 nurses and midwives, of which, 2715 (65.5%) in WB and 1427 (34.5%) in GS (MOH, 2017).

1.8 Definition of terms

Pain: pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage (Lissauer, et al., 2017).

Knowledge: a state of knowing about something (Odile, 2017). In this study, knowledge means the nurses level of knowing and understanding of the physiological basis of pain, the tools used for pain assessment and pharmacologic and non-pharmacologic methods used for pain management.

Attitude: a feeling held regarding a fact or state (Baar, 2010). In this study, attitude means the feeling that held by nurses regarding child pain, use of pain assessment tools and use and effectiveness of pharmacologic and non-pharmacologic intervention.

Practice: is something that is usually or regularly done, often as a habit, tradition or custom (Odile, 2017). In this study, practice relates to use of pain assessment scale and pharmacological and non-pharmacological actions by nurses to alleviate children pain in pediatric departments.

Pain management: use of pharmacological and non-pharmacological interventions to control the child identified pain (Academy Medical Surgical Nursing - AMSN, 2018).

Pain assessment: provide accurate information about the location and intensity of pain and its effects on the child functioning (London, et al., 2014).

A child: is a person 19 years or younger unless national law defines a person to be an adult at an earlier age (WHO, 2013). In this study the child was defined as anyone below the age of 12 years.

Chapter Two

Literature review

This chapter presents an integrated overview of explicit knowledge on the basis of existing theory and literature describing the concepts of interest to this study.

2.1 Concepts and types of pain

Pain is a highly individualized, subjective experience that can affect any person of any age. It is a complex phenomenon that involves multiple components and is influenced by myriad factors (Ricci, et al., 2013). Pain is a complex experience that is not easily communicated, because perception and tolerance of pain vary widely from one person to another person, it is difficult to define and describe (Adem, et al., 2017). In general, pain refers to an unpleasant, distressful and uncomfortable feeling (Cheng, et al., 2003). Traditionally, pain was considered merely a physical symptom of illness or injury brought about by a simple stimulus - response mechanism (Hossain, 2010). In recent times, the concept of pain has evolved from one-dimensional to a multi-dimensional entity involving sensory, cognitive, motivational and affective qualities (Stanley& Pollard, 2013).

Over time, various definitions have been given to describe and understand this pain in medical literature. In 1968, McCaffery defined pain as whatever the experiencing person says it is, existing whenever s/he says it does. This definition emphasizes that pain is a subjective experience with no objective measures. It also stresses that the patient, not clinician, is the authority on the pain and that his or her self-report is the most reliable indicator of pain (Bernhofer, 2011). In 1992, North American Nursing Diagnosis Association defines that pain is a state, in which an individual experiences and reports severe discomfort or an uncomfortable sensation; the reporting of pain may be either by direct verbal communication or by encoded descriptors (Kumar & Elavarasi, 2016). In

2012, WHO also defined the pain as a multidimensional phenomenon with sensory, physiological, cognitive, affective, behavioral and spiritual components. Emotions, behavioral responses to pain, beliefs, attitudes, spiritual and cultural attitudes about pain and pain control, all alter the way that pain is experienced by modifying the transmission of unpleasant stimuli to the brain (WHO, 2012).

Scientifically and medically pain has been categorized into different types. This is depended on duration, source or anatomical, pathophysiological and cause of pain. Classification based on pain duration, there are two main type acute and chronic. Acute pain is define as pain of recent onset and probable limited duration, it usually has an identifiable temporal and causal relationship to injury or disease, most acute pain resolves as body heals after injury. Chronic pain commonly persists beyond the usual course of an acute illness or healing time of an injury, usually beyond three to six months, it may be continuous or intermittent, with and without periods of exacerbation or remission, it often interferes with sleep and performance of activities of daily living (Schug, et al., 2015).

Classification based on pathophysiological, there are two main type nociceptive and neuropathic pain. Nociceptive pain; this type of pain arises as the tissue injury activates specific pain receptors called nociceptors, which are sensitive to noxious stimuli, these receptors can respond to different stimulus and chemical substances released from tissues in response to oxygen deprivation, tissue disruption or inflammation. It can be somatic or visceral pain based on the site of the activated receptors. Somatic pain is caused by the activation of nociceptors in either surface tissues such as skin, mucosa of mouth, nose or deep tissues such as bone, joint, muscle or connective tissue. e.g. cuts and sprains causing tissue disruption produce surface somatic pain while muscle cramps due to poor oxygen supply produce deep somatic pain. Visceral pain is caused by the activation of nociceptors located in the viscera (the internal organs of the body that are enclosed within a cavity such

as thoracic and abdominal organs), it can occur due to infection, distension from fluid or gas, stretching or compression, usually from solid tumors. Neuropathic pain is caused by structural damage and nerve cell dysfunction in the peripheral or central nervous system. Any process that causes damage to the nerves, such as metabolic, traumatic, infectious, ischemic, toxic or immune-mediated pathological conditions, can result in neuropathic pain (Kahsay, 2017).

In anatomical classification, pain is often classified by body location e.g. head, back or neck or the anatomic function of the affected tissue, e.g. myofascial, rheumatic, skeletal, neurological and vascular. However, location and function solely address the physical dimension and do not include the underlying mechanism. As such, although anatomical classifications can be useful for differential diagnoses, these classifications do not offer a framework for clinical management of pain. Classification by etiology, has little relevance to the mechanism and treatment of pain in children as categorization is commonly based on the underlying disease being malignant or non-malignant (WHO, 2012).

2.2 Clinical manifestations of pain

2.2.1. Physiologic Indicators:

Pain stimulates the adrenergic nervous system and results in physiologic changes, including tachycardia, tachypnea, hypertension, pupil dilation, pallor, increased perspiration, and increased secretion of catecholamine and a drenocorticoid hormones. Changes in these signs demonstrate a complex stress response. These signs are not specific to pain, so they cannot be used for monitoring pain. Chronic pain of long duration permits physiologic adaptation, so normal heart rate, respiratory rate and blood pressure levels are often seen (London, et al., 2014).

2.2.2. Behavioral Indicators:

Children in acute pain behave in many of the same ways as children who show signs of fear and anxiety. These behaviors include the following: short attention span, irritability, facial grimacing, biting or pursing lips, posturing (guarding a painful joint by avoiding movement), remaining immobile, or protecting the painful area, drawing up knees, flexing limbs, massaging affected area, lethargy, remaining quiet, sleep disturbances (London, et al., 2014).

2.3 Misconceptions about children pain

Unfortunately, several research studies indicated that nurses have a knowledge deficit regarding pain, and may hold negative attitudes towards (Nimer & Ghrayeb, 2017). Misconception and myths about children pain and it control have been accepted by lay people and practitioner alike. However this intuitive often misinformed approach (Walco & Goldschneider, 2008). One significant misconception, the newborns and infants are incapable of feeling pain, children do not feel pain with the same intensity as adults because a child nervous system is immature, this myth has been disproved as the anatomic and functional requirements for pain processing are present early in fetal life. Term infants have the same level of sensitivity to pain as older infants and children. A common misconception shared by nurses is that narcotics are unsafe for use in children due to potential side effects and fear of addiction in older children, in reality narcotics can be used safely in children of all ages, the most dangerous side effect, respiratory depression, can easily be monitored (Registered Nurses Association of Ontario - RANO, 2013; London, et al., 2014).

The misconception that pain is not life threatening, and that it has no long lasting effect on children because they cannot remember it, has also been shown to be untrue by the fact that neonates have changes in vital signs. Painful procedures can cause excessive and prolonged crying which can increase intracranial pressure. Babies in pain may also have lower oxygen saturations. Children cry and are often fearful at immunization clinics as early as nine months of age suggesting that they remember unpleasant stimuli. Another misconception regarding pain is that, if a child does not express pain or denies pain, then he or she is not having pain. Children often deny pain to avoid unpleasant interventions such as intramuscular injections or bad tasting oral medications. Children do not necessarily realize that they must report pain or ask for pain relief. Other misconception that children without obvious physical reasons for pain are not likely to have pain. This myth has been disproved as the cause of pain cannot always be determined, the feeling of pain is subjective and should be accepted by nurses (RANO, 2013; London, et al., 2014).

2.4 Prevalence of pain

There is numerous pediatric pain management studies over the past 20 years (Efe, et al., 2017). The study come out of the developing world took place in Jordan at pediatric cancer hospital found pain prevalence at 47 % (Forgeron, et al., 2005).

A recent survey of children (N=3,822) admitted to 32 units in eight Canadian pediatric hospitals, found 78.2 % of them had undergone at least one painful procedure in the previous 24 hours, but only 28.3 % of those children received a pain management intervention (RNAO, 2013). Further pain prevalence studies done thereafter, with a more recent one conducted in turkey 2017, reported that 76.1% postoperative children experience pain (Efe, et al., 2017).

In the United Kingdom, 8% of the young population suffers from severe pain, and in Australia 67% of the population aged 15 years complains of bodily pain (Al Omari, 2015). Additional, in Brazil, percentages pain in cancer children is approximately 78% at diagnosis, 25 to 58% during treatment, and up to the 90% in later stages of the disease (Chotolli & Luize, 2015). It is concerning that the rate of clinically significant pain in hospitalized children has not decreased significantly over almost two decades. The high prevalence of pain, and its impact, makes pain a public health issue. Indeed, it seems incongruous that while scientific research has uncovered many of the biochemical, neurobiological and psychosocial processes of pain, along with the development of sophisticated treatments for its control, many people, even in countries such as Australia, continue to live with unrelieved pain (Conway& Higgins, 2011).

2.5 Factors influencing on the children pain

There are too many factors influencing children pain, the most important and studied factors are:

2.5.1. Age:

Age of the child is an important factor in dealing with pain, children response to pain in different way. Young children not report pain verbally, generally they exhibit pain by their behavioral response, these response are associated vocalization, facial expression, and body movement. Older children are able to report their pain appropriately except for these who are cognitively disabled or are very sick, children of preschool and school age can report pain but not intensity; therefore nurse need to use words familiar to them and with parent assistance (Hossain, 2010).

2.5.2. Gender:

Gender may play a role in a child perception of pain, but research has failed to yield concrete evidence supporting it. It has been suggested that boys and girls differ in how they perceive and cope with pain and respond to analgesics. This may be influenced by various factors including genetics, hormones, family, and culture (Ricci, et al., 2013).

2.5.3. Temperament:

Literature suggests that temperament plays a role in predicting distress and pain levels in a child during painful events. e.g., a child with a difficult temperament is more likely to have an increased distress response to pain. Nurses can personalize interventions in the clinical environment and during the pain experience to better fit the child temperament and other personality traits of the child and family (Ricci, et al., 2013).

2.5.4. Fatigue, Attention and Anxiety

Fatigue increases the perception of pain. Fatigue causes the sensation of pain has intensified and lower coping abilities. The level of child to focus attention on the pain can affect the perception of pain. Increased attention associated with increased pain, while the transfer of effort associated with a decreased response to pain (North American Nursing Diagnosis Association -NANDA, 2012). Anxiety, fear, and a sense of loss of control contribute to patient suffering. Treating anxiety and providing psychological support has been shown to improve pain and reduce analgesic use (Hansen & Streltzer, 2005).

2.5.5. Family and social Support:

The impact of parent factors on children pain related distress and disability is well documented. Parents' reactions to their child pain can have a significant effect on physical and psychological well-being. e.g. parents who catastrophize about their child pain are

more likely to have children with higher levels of functional disability. The impact of solicitous parental behavior, which involves increased attention to the child pain and granting permission to avoid school or other activities in order to minimize distress, is thought to negatively affect children psychosocial development as well as their physical functioning. Negative parental responses, which include critical and dismissive reactions, have been associated with symptom maintenance, particularly in children with low perceived self-worth. Minimizing responses may cause emotional and psychological distress which may lead to an increase in somatic symptoms. These behaviors have the potential to undermine a child treatment (Rook & Gauntlett-gilbert, 2016).

2.5.6. Previous pain experiences:

Each individual learns from the experience of pain. Previous experience of pain does not necessarily mean that the individual will receive pain more easily in the future. If the individual has long had a series of frequent episodes of pain without ever recovering or suffering from severe pain, the anxiety or fear may arise. If individuals do not ever feel the pain, the first perception of pain can interfere with coping with pain (Purity & Bunmi, 2014).

2.6 Pain assessment in children

Pain assessment involves obtaining information about the location, duration and characteristics of the pain, as well as the impact of persisting pain on various aspects of the child life such as sleep, emotional state, relationships, development and physical function (WHO, 2012). Pain is often referred to as the "fifth vital sign" and it should be assessed and recorded as often as other vital signs. The appropriate intervention of pain is planned based on the accurate valuation of pain. Organized and routine pain assessment by using

the standardized and validated measures is accepted as a corner stone for effective pain management in patients, unrelatedly to the age or other conditions (Kahsay, 2017).

A comprehensive assessment of pain condition requires pain history, physical examination, and specific diagnostic tests. Pain history, is usually obtained as part of the child history, which includes the children past medical history, family history, and psychosocial history. The self-report of pain is the most reliable indicator of pain. Physiological and behavioral (objective) signs of pain e.g., tachycardia and grimacing are neither sensitive nor specific for pain and should not replace child self-report unless the child is unable to communicate. Therefore, talking to child and asking them about their pain is integral to pain assessment. Obtaining a comprehensive history provides many potential benefits, including improved management, fewer treatment side effects, improved function and quality of life, and better use of health care resources (APS, 2010).

In physical examination, the nurse identify the underlying cause of the pain and reassure the child that his or her complaints of pain are taken seriously. During this examination, the nurse appraises the children general physical condition, with special attention to the musculoskeletal and neurological systems and site of pain. The nurse also may evaluate the effect of various physical factors e.g., motion, applied heat or cold, deep breathing, changes in position on the pain and/or performance measures of physical function e.g., range of motion, ability of child to carry out activities of daily living. In diagnostic tests, the need for and type of diagnostic tests are determined by characteristics of the pain and suspected underlying condition. Appropriately selected tests can lead to accurate diagnosis and improve outcomes (APS, 2010)

2.7 Pain Assessment Scales

There are a numerous pain assessment scales that have been developed and proven valid and reliable for the pediatric population.

2.7.1. Pain Behavior Scales for Nonverbal Children:

Physical and behavioral indicators are used to quantify pain in nonverbal children, it rely on the nurses observation of the child behavior.

2.7.1.1. Neonatal Infant Pain Scale (NIPS):

Designed to measure procedural pain in preterm and full-term newborns up to 6 weeks after birth. The newborn facial expression, cry quality, breathing patterns, arm and leg position, and state of arousal are observed. This tool has high inter-rater reliability and validity.

2.7.1.2. FLACC:

Designed to measure acute pain in infants and young children following surgery, and it can be used until the child is able to self-report pain with another pain scale. FLACC is an acronym for the five categories that are assessed: Face, Legs, Activity, Cry, and Consolability. To use FLACC the nurse observes the child during routine care for 1 to 5 minutes, and then selects the score that most closely matches each behavior noted. The scores for the five categories are added together for the total score. The tool has validity and reliability for evaluation of postoperative pain (London, et al., 2014).

2.7.2. Self-Report Pain Scales:

To use these pain scales, the child must be developmentally ready and understand the concept of a little or a lot of pain well enough to tell the nurse.

2.7.2.1. The Oucher Scale:

Presents a series of six photographs of a child expressing increased intensity of pain in combination with a vertical Visual Analog Scale. The child selects a face that best fits his or her level of pain; an older child can select a number between 0 and 10.

2.7.2.2. The Faces Pain Rating Scale:

Has a series of six cartoonlike faces with expressions from smiling to tearful that can be used by children starting at 3 years of age. The nurse explains the meaning of each face and asks the child to select the face that is the closest match to the pain felt.

2.7.2.3. The Numeric Pain Scale or Visual Analog Scale:

A single 10-cm horizontal or vertical line that has descriptors of pain at each end (no pain, worst possible pain) marks and numbers are placed at each cm on the line.

2.7.2.4. The Poker Chip Tool:

Uses four checkers or poker chips to quantify pain. The child is asked to pick the number of chips that best match the pain felt, with one chip being a little pain and four being the most pain he or she could have.

2.7.2.5. The Word-Graphic-Rating Scale:

Has words describing increasing pain intensity across a horizontal line. The child marks the line that is closest to the level of pain felt. A millimeter ruler can be used to quantify the pain and record the pain score (London, et al., 2014).

2.8 Pain management

Pain management is the alleviation of pain or a reduction in pain to a level of comfort that is acceptable to the patient (Perry, et al., 2014). Children pain management is so difficult and challenging especially during childhood, for this reason the approach to the treatment of pain must be multi-modal, including the use of pharmacological and non-pharmacological methods (Purity & Bunmi, 2014).

2.8.1. Pharmacologic methods:

This means that give analgesics as ordered by the physician. Multiple systems for classifying analgesics exist, American Pain Society broadly categorized analgesics as follow: Non opioid analgesics; acetaminophen and non-steroidal anti-inflammatory drugs, including aspirin and other salicylic acid derivatives. Opioid analgesics; e.g. morphine-like agonists. Adjuvant analgesics or co-analgesics; a diverse group of drugs, with primary indications for conditions other than pain, with analgesic properties relevant to some conditions. Commonly used adjuvant analgesics include antiepileptic drugs, tricyclic antidepressants, and local anesthetics (APS, 2010).

2.8.2. Non-pharmacological methods:

Non-pharmacological pain management consists of a variety of physical, cognitive behavioral, and lifestyle pain management strategies that target the body, mind, spirit, and social interactions (Perry, et al., 2014). For many years, nurses have used non-pharmacologic techniques to help patients manage their pain. Although the evidence of its effectiveness cannot be researched in a controlled, blinded manner, it was supported by anecdotal reports (patients saying the methods help). Non-pharmacologic methods are classified as cognitive and physical. During the episodes of acute pain, patients rely on these previously proven cognitive methods such as breathing, meditation, imagery, music

and distraction or focusing attention away from pain. Physical techniques on the other hand focus on altering physiological processes that may reduce pain, included in this technique are massage, repositioning as well as heat and cold application (Madenski, 2014). The most common of non-pharmacological methods to treat pain based on the recent studies are:

2.8.2.1. Breast feeding:

Breast milk is the best alternative to no intervention or to the use of sucrose in patient suffering with a single painful procedure. During venipuncture and heel stick procedures, infant who were breastfed showed a substantial decrease in the variability of physiologic response as compared to other non-pharmacological interventions (Kahsay, 2017).

2.8.2.2. Skin-to-skin contact:

Skin-to-skin contact during a painful procedure reduces physiological and behavioral signs of pain. This strategy has proven effective in reducing the pain of infant during acute procedures, especially after capillary punctures. Skin-to skin contact should initiate before the painful procedure and be kept throughout its duration and after it is finished, when possible (Cássia et al., 2014). This care is recommended by major organizations such as the WHO, American Academy of Pediatrics, Academy of Breastfeeding Medicine, and the Neonatal Resuscitation Program (Strobel, 2015).

2.8.2.3. Massage:

Massage is a comfort measure that can aid relaxation and decrease muscle tension as well as ease anxiety as the physical contact communicates caring. Massage can also decrease pain intensity by increasing superficial circulation to the area. Massage can involve the back and neck, hands and arms, or feet (Perry, et al., 2014).

2.8.2.4. Application of heat and cold:

Heat and cold applications alter physiologic mechanisms associated with pain. Cold results in vasoconstriction and alters capillary permeability, leading to a decrease in edema at the site of the injury. Due to vasoconstriction, blood flow is reduced and the release of pain-producing substances such as histamine and serotonin also is decreased. Moreover, transmission of painful stimuli via peripheral nerve fibers is decreased. Heat results in vasodilation and increases blood flow to the area. It also leads to a decrease in nociceptive stimulation and removal of chemical substances that can stimulate nociceptive fibers. The increase in blood flow alters capillary permeability, leading to a reduction in swelling and pressure on nociceptive nerve fibers. Heat may also trigger the release of endogenous opioids, which mediate the pain response (Ricci, et al., 2013).

2.8.2.5. Distraction:

One of the most effective non-pharmacological methods used is the distraction technique, effective in reducing short-duration procedural pain in children. Distraction techniques aim to shift the attention from the medical treatment to any other stimulant which may help the patient better control his perception. Distraction is a simple technique which does not require any specific training and can be implemented by nurses, parents or other health staff members besides, it has a minimal cost and implies no risks for the patient. Several are the strategies to be used: watching cartoons, using party blowers, blowing bubbles, listening to music (Buratti, et al., 2015).

2.8.2.6. Breathing techniques:

Rhythmic deep breaths can be used with distraction or muscle relaxation during a painful procedure, or as a mechanism to reduce stress. Encourage the child or adolescent to take a deep breath, hold it for 5 seconds, and blow out through the mouth, as if to push the

tension out or the needle away. Another breathing technique is patterned, shallow breathing. The child is encouraged to take shallow breaths in through the nose and blow out through the mouth while thinking of a particular image. The image could be a train and short breaths could be the "toot, toot" of the train engine (London, et al., 2014).

2.9 Ethics in pain management

Nurses individually and collectively have an obligation to provide comprehensive and compassionate care, which includes the promotion of comfort, the relief of pain. The ethical tenets of beneficence, non-maleficence, autonomy, veracity and justice that govern practice continue to guide children pain management. Beneficence (the duty to benefit another) requires nurses to manage pain and provide compassionate care. Non maleficence (the duty to do no harm) reminds us that acute pain is a warning signal and that unrelieved pain is physically and psychologically harmful, it is also our responsibility not to inflict pain and suffering. Patient and family have the right to be given all the information necessary to make an informed decision and participate in their pain management. Veracity (truth-telling) is the basis for therapeutic relationships. Autonomy along with veracity means the patient and/or the family has the right to self-determination. Justice mandates that everyone have access to pain management (Reynolds, et al., 2013).

2.10 Consequences of untreated pain

2.10.1. Physiological:

In response to the stress of unrelieved pain, sympathetic nervous system activity increased, results increases heart rate, blood pressure and peripheral vascular resistance. Due to this, the oxygen consumption of the myocardium also increases. Which may results myocardial ischemia and, potentially, heart failure can occur. Unrelieved pain can result in a patient limiting the movement of the thoracic and abdominal muscles in a bid to reduce pain, a

phenomenon known as ‘splinting’. This may cause some degree of respiratory dysfunction with secretions and sputum being retained because of a reluctance to cough, atelectasis and pneumonia may follow, results in a reduction in vital lung capacity, increased inspiratory and expiratory pressures and reduced alveolar ventilation lead to hypoxia and cardiac complications (Jin, 2015). On the other hand, lead to increased intestinal secretions and smooth muscle sphincter tone which can cause impaired gastrointestinal functioning, ileus. Also lead to abnormal release of hormones that affect urine output, fluid volume, and electrolyte balance. Depression of the immune system also can be caused by unrelieved pain, this may predispose the patient to a variety of infections and sepsis (APS, 2010).

2.10.2. Psychological effects:

Anxiety and pain are positively correlated. Patient who express unusually high levels of anxiety also tend to have a higher than expected incidence of early noxious stress. The acute stress-induced hormonal changes that occur with unrelieved pain result in hypercortisolism. High levels of cortisol are also a consistent feature of anxiety physiology. Therefore, the stressor effects of unrelieved pain have the potential to increase anxiety levels further and interfere with activities of daily living, such as diet, exercise, work or leisure activities and to interrupt normal sleep patterns causing varying degrees of insomnia (Jin, 2015).

2.11 Nurses knowledge, attitude and practice regarding pediatric pain management

In this part the researcher reviewed the studies conducted in nationally, regionally and internationally to provide reader with an understanding of the major findings of these studies.

A quantitative cross sectional study conducted during March, 2017 in WB, Palestine, to assess knowledge levels and attitudes regarding pain management among nurses working

at hospitals in south of WB. A stratified random sample of 380 nurses working in the critical care, emergency department, medical-surgical; oncology, pediatric, renal, and surgical services collected from six governmental and private hospitals. The study signified that nurses had deficit in knowledge and attitudes toward pain assessment and management, and no significant difference in the mean score of knowledge in relation with gender, age group, level of education and previous training courses or workshops on pain management (Nimer & Ghrayeb, 2017).

In Egypt, descriptive cross sectional study conducted to assess undergraduate nursing student knowledge and attitude regarding pain management in children. The study participants consisted of a convenience sample of undergraduate nursing students at third and fourth year during the academic year 2015-2016 at faculty of nursing in Assiut University. The study concluded that nursing students had poor knowledge and attitude regarding pain management when using pediatric nurses knowledge and attitude survey (PNKAS) especially in the part of pain assessment and pharmacological pain management. This study recommended that the pediatric staff should review the curriculum to enrich more about assessment and management of pain and preparing pediatric nursing labs with sufficient facilities to strengthen skills regarding pain assessment and management (Gadallah, et al., 2017).

A study was conducted by Al Omari, (2015) Jerash, Jordan, to test the nursing students knowledge and attitudes toward children pain management across three private universities. The convenience sample of 101 nursing students completed the PNKAS. The study results showed the nursing students have poor knowledge and attitudes towards pediatric pain assessment and management.

In Jordan, cross sectional study was carried out in 2016 to evaluate the knowledge and attitudes of healthcare providers toward pain management. A sixteen item questionnaire

with agree or disagree options given to 662 healthcare providers in seven hospitals. The study concluded that healthcare providers had insufficient knowledge and attitude specifically in relation to pain assessment and management among children. Nurses scored the lowest for knowledge of pain assessment and management among healthcare providers (Nuseir, et al., 2016).

In 2017, descriptive study using qualitative methods was conducted at pediatric department of Queen Elizabeth Central hospital, Blantyre, Malawi, to explore knowledge and attitudes of nurses in management of pain in children. Purposive sample consisted of 17 nurses with prior pain management training were interviewed using a semi-structured interview guide. The study revealed has knowledge and attitude gaps, which may reflect deficiencies in the pain education nurses received, non-availability of pain scales and lack of support for nurses to link theory with practice (Kholowa, et al., 2017).

Descriptive cross-sectional study was conducted in Mexico to investigate the knowledge and attitudes regarding pediatric pain in two different populations (nurses and nursing students). The PNKAS, was applied to 111 hospital pediatric nurses and 300 university nursing students. The study revealed that the degree of knowledge and attitude about pain and its treatment was very low in both groups. It is necessary to increase the continued training in this subject in both areas (Ortiz, et al., 2015).

In Nairobi, Kenyatta national hospital, quantitative cross sectional study was conducted within the general pediatric wards to evaluate the knowledge and attitudes of different healthcare workers regarding pain assessment and management in children, Additionally, to determine if socio-demographic factors and the number of years in clinical practice are variables that have an independent association with level of knowledge and attitudes in pain management. A convenience sample of 92 health workers including nurses, pediatric

post-graduate students and pediatric consultants. The study showed significant knowledge and attitude deficiencies exist regarding currently accepted principles of pain management practice, as well as beliefs that could interfere with optimal care (Jin, 2015).

A study on Saudi nurses conducted to explore their knowledge and attitudes toward pain management. A cross-sectional survey was conducted in three selected hospitals that represent the healthcare sector in Saudi Arabia from north, middle, and south regions in Riyadh city. The study participants consisted of convenience sample from 300 nurses. The study showed that Saudi nurses had inadequate knowledge and attitude regarding pain management and there is a significant difference in the mean was observed in regard to gender, and females nurses had higher mean score than males nurses (Samarkandi, 2018).

A cross-sectional study conduct by Stanley and Pollard, (2013) Charlotte, USA, to examined the level of knowledge of pediatric pain management, the attitudes of nurses, and the level of self-efficacy of pediatric nurses in acute care. In addition, the relationship between the years of experience and the levels of knowledge, attitudes were examined. A convenience sample of 25 pediatric nurses complete PNKAS and Nurses Self-Efficacy in Managing Children Pain Survey. The study showed that the nurses have moderate level of knowledge, attitude and a high level of self-efficacy in regard to pediatric pain management. Also there was no statistically significant relationship between knowledge and self-efficacy and a statistically significant relationship between the level of knowledge and the years of pediatric experience.

A study conducted in turkey by Ekim and Ocakc, (2013) to determine the level of knowledge and attitudes of pediatric nurses regarding the children pain management. The PNKAS was used to evaluate the nurses knowledge and attitudes. The findings of the survey showed that pediatric nurses in Turkey have insufficient knowledge and attitude regarding pain management and could benefit from additional education on that issue.

A descriptive cross sectional study involving 40 nurses was conducted in India to evaluate the knowledge, attitude, and practices of pediatric pain management among nursing personnel working in pediatric tertiary care hospital. The study revealed a deficiency in the knowledge, attitude and practices of nurses regarding pain management in children and regular training programs and workshops may be required to enhance the competency of nurses in pain management of children (Patnaik, et al., 2017).

In 2010, descriptive study conducted in Bangladesh to examine the level of nurses knowledge and attitudes as well as their post-operative pain management practice for children. A convenience sample from 93 nurses who were currently working in pediatric surgical units complete a survey questionnaire to collect data about nurses knowledge and attitudes and their pain management practices for children undergoing surgery. The study revealed that nurses knowledge, attitudes and practice in pain management was at the moderate level. No relationship was observed between nurses knowledge and attitudes, and their pain management practices (Hossain, 2010).

Smeland, et al., (2018) study, conducted in six university hospitals in Norway, to identify nurses knowledge and clinical practice of pediatric postoperative pain management and whether there is a link between knowledge and practice. The study results revealed that the nurses have deficiency in knowledge and practice about pediatric pain management and do not always use their knowledge in practice particularly in relation to pain assessment. There is a need to improve nurses knowledge of pediatric pain management and to test interventions that support the use of that knowledge in practice.

Descriptive study conducted in turkey, aimed to describe Turkish pediatric surgical nurses use of non-pharmacological methods for relieving postoperative pain in 6 to12 year old children. Simple random sample include 92 pediatric nurses working at 17 university hospitals between June and September, 2012. The study showed the Turkish pediatric

surgical nurses used many non-pharmacological methods in relieving school aged children postoperative pain in hospital (Efe, et al., 2017).

A prospective descriptive survey was conducted by Subhashini, et al., (2009) at a tertiary care hospital in North India, to assess the knowledge, attitude and practices among health care professionals regarding pain in children. The study revealed deficiency in the knowledge and attitude of health care professionals and also their practices regarding pain management in children. The findings emphasize the need to improve the knowledge and practices of health care professionals for assessment and management of pain in children.

A descriptive cross-sectional study including a questionnaire was conducted in neonatal units in Bandar Abbas University hospitals, Iran, to determine nurses knowledge, attitude, and performance pain management in neonates. A total of 50 nurses and nurse assistants working in the neonatal units participated in the study. The results showed that the nurses had poor performance regarding the assessment, measurement, and relief of pain. However, they showed positive attitudes towards pain control in neonates (Noghabi, et al., 2014).

Descriptive cross sectional study and based on questionnaire, was conducted to describe the nurses knowledge, attitude and practice of pain management in children, perceived barriers to optimal pain management, and analgesics administered by nurses in relation to levels of children pain. Data were collected from 67 nurses and 132 children in their care. The results showed that most nurses demonstrated knowledge and positive attitudes and moderate level of practice about relieving children pain. This study conclude that nurses in practice need to become more aware of the adequacy of their analgesic administration, the value of children self-report of pain, and the limitations of relying on children behavioral manifestations to judge pain intensity (Vincent, 2005)

Chapter Three

Methodology

3.1 Study Design

This was a quantitative cross-sectional design using a survey questionnaire to examine the nurses' knowledge, attitudes and practices regarding pediatric pain management in southern governmental hospital of Gaza strip

3.2 Study setting

Pediatric departments in southern governmental hospitals of Gaza Strip (European Gaza Hospital (EGH), Nasser complex and Najjar hospital).

3.3 Study Population

Employed nurses currently working at pediatric departments in southern governmental hospitals of Gaza Strip (EGH, Nasser complex and Najjar hospital).

3.4 Sampling and sample size

The convenience sample used for this study consisted from all nurses who worked in pediatric departments with a total number of 90 nurses distributed as follow: EGH 37 nurse, Nasser complex 39 nurse and Najjar hospital 14 nurse.

3.5 Eligibility criteria

3.5.1. Inclusion criteria:

Employed nurses currently working at one the following pediatric departments (medical, surgical and emergency).

3.5.2. Exclusion criteria:

- Volunteers.

- Internship students.

- Student nurses.

3.6 Instrument of the study

A survey questionnaire for pediatric nurses knowledge, attitude and pain management practice for children. It was developed by the researcher based on different literatures and it was consisted of four parts (socio-demographic, knowledge, attitude and practice), (Annex C; D).

Part one: this part consisted of a questionnaire on socio-demographic characteristics of the participants. It was made up of 8 items and include: hospital, working department, age, gender, education qualification, years of experience in the nursing profession, years of experience in pediatric department and current position. This part was developed by researcher.

Part two: this was a questionnaire on nurses knowledge on pediatric pain management. It consisted of 10 yes/no/don't know statements. For each correct answer, the researcher assigned of three (3), one (1) score was assigned for an incorrect answer and two (2) for don't known. The total score range from 10 - 30. There were 9 true and 1 false items (number 3). The questionnaire cover nurses knowledge regarding: definition of pain; tools used for pain assessment; ideal time for pain assessment; frequency of using pain assessment tools; definition of under treatment; schedule for giving opioids; drugs useful for treating mild pain; physical and cognitive technique that may reduce pain, advantage of non-pharmacologic pain management measure. This part was developed by the researcher.

Part three: this was a questionnaire on the attitude of nurses toward pediatric pain management. This part contained 17 items and participants mark their attitude on three point likert, ranging from 1 to 3 (disagree to agree) respectively. For each item, a score of five (5) was accorded for agree, a score of three (3) was accorded for neutral and a score of one (1) for disagree. The total score ranged from 17 - 85. This part include measurement number of attitude regarding; child pain behavior; child pain misconception; use and effectiveness pharmacologic and non-pharmacologic intervention; use pain assessment tools; nurses education and experience; use of placebo; differences between medical and surgical pain; family role and social support in pain management. This part was developed by (Manwere et al., 2015) and modified by researcher in this study.

Part four: this was a questionnaire on the practice of nurses regarding pain management in children. This part contained 19 items and the participants mark their performance on five point likert scale, ranging from 1 -5 (never to constantly) respectively. For each item, a score of five (5) was accorded for constantly and a score of one (1) for never. The total score range from 19-95. This part included the measurement of a number of practice. These included: performance in children pain assessment and management; the use of different age appropriates pain measurement tools for pain assessment; assessment objective and subjective signs of pain; the use of pharmacologic and non-pharmacologic measures; awareness of adverse effect of pain medication; reassessment of pain in order to evaluate the effectiveness of pain medication and frequency of use of pro re nata (PRN) pain medication for pain management. This part was developed by (Broom et al., 1996) and modified by researcher in this study.

3.7 Scoring system

In this study, the researcher adopted Hossain scores (Hossain, 2010), who modified the McDonald learning outcomes into three levels (A, B, C) in order to grade nurses knowledge, attitudes and practice of pain management as follows:

	Percent Score		Levels
A	80.00 - 100%	=	High
B	60.00 - 79.99%	=	Moderate
C	< 60 %	=	Low

3.8 Validity of the instrument

The instrument was reviewed by five experts for face and content validity (Annex B). The expert team evaluated the content validity of instrument whether they were sufficiently relevant and whether they adequate measure the variable in the study. The researcher then further modified the instrument based on their recommendations.

3.9 Reliability of the instrument

The reliability of instrument was demonstrated by a Cranach's alpha 0.71 for knowledge, 0.75 for attitude, 0.91 for practice and 0.83 for KAP.

3.10 Pilot study

A pilot study was carried out at Najjar hospital with 10 nurses to ensure reliability of the instrument. As the result of the pilot study, some necessary adjustment on questionnaire were made.

3.11 Data collection

Data was collected by the researcher from March to May 2018, the objectives of the study were explained to the head nurses of the pediatric departments of the selected three hospitals. The researcher determine eligible nurses who meet criteria. The questionnaires were delivered to the units and envelopes were provided for the finished sheets. The questionnaires were collected by researcher on designated time. Researcher took care to check that all questionnaire are returned and complete.

3.12 Data management and statistical analysis

All data emanating from the study questionnaires was cleaned, verified and analyzed using SPSS version 15.0. Descriptive statistics (Frequency, percentage, standard deviation (SD) and means) were used to describe the nurses socio-demographic characteristics. Nurses knowledge, attitude and practice about pain management were analyzed and presented in terms of frequencies, percentage, means, SD and minimum and maximum score. Pearson correlation was used to examine relationship between nurses knowledge, attitude and pain management practice.

3.13 Ethical considerations

Before data collection began, the proposal was submitted and approved by department of nursing, Al Quds University (Annex F), Helsinki Committee (Annex E) and Ministry of health. (Annex G) All nurses participants were asked to sign consent forms after reading an information sheet (Annex A).

3.14 Limitations

- The researcher is a novice and lack of experience**.**
- Frequent electricity cuts.

- Limited available related studies and research in Palestine.
- The participants were recruited from only governmental hospitals in southern GS thus the results of this study may not be representative of the nurses from private hospitals and other governmental hospitals in GS.

Chapter Four

Results and Discussion

In this chapter, the researcher presented the main study results based on the results of the statistical analysis including the professional and socio-demographic characteristics of the nurses participants such as level of education, age, gender, working departments, experience, the level of knowledge, attitude and practice of nurses regarding pediatric pain management as well as the effect of different independent variable on them. The researcher conducted frequencies and Analysis of variance (ANOVA) to test the differences between knowledge, attitude and practice as dependent variable and socio-demographic factors as independent variable.

4.1 Results

4.1.1. Socio-demographic characteristics:

A total ninety eligible participants were approached and eighty seven questionnaire were returned with a high response rate (96.6%). The participants age ranged between 22-53 years olds. The mean age was 32.9 years with SD of 6.9 years. The majority of the participants 64 (73.6. %) were female, while 23(26.4%) were male nurses. About (59.8%) of nurses worked in medical department while (24.1%) worked in emergency departments and (16.1%) worked in surgical departments. Regarding the level of education, more than half of the participants had bachelor degree 57 (65.5%) while less than third 26 (29.9%) had a diploma and the minority 4 (4.6 %) had a master degree, more socio-demographic details see Table (4.1).

Table (4.1) Socio-demographic and professional characteristics of the participants (n=87)

Variable	Frequency	Percent (%)
Gender		
Male	23	26.4
Female	64	73.6
Educational level		
bachelor	57	65.5
Diploma	26	29.9
Master	4	4.6 %
Working department		
Emergency	21	24.1
Medical	52	59.8
Surgical	14	16.1

Mean	SD	Minimum	Maximum
Age (years)			
32.9	6.9	22	53
Experience as a nurse (years)			
9.4	6.1	1	30
Experience in pediatric department (years)			
6.6	4.7	1	20

Additionally, the results showed that the majority of participants 82.8% their current position is bedside nurse, 9.2% is senior nurse and 8% is head nurse. Figure (4.1).

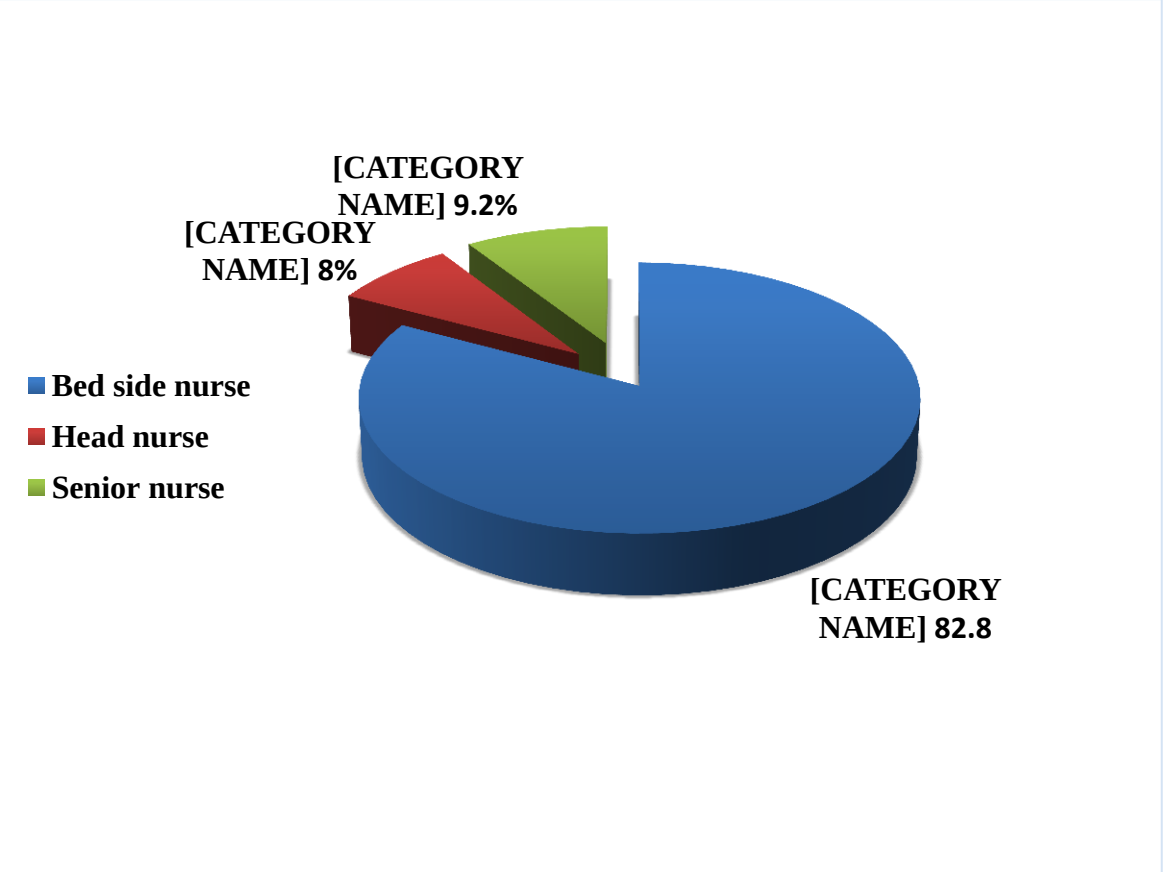

Figure (4.1) Distribution of the participants according to current position

4.1.2. Level of knowledge regarding pediatric pain management:

4.1.2.1. Level of Knowledge:

To determine the level of pain management knowledge among nurses who working at pediatric departments in southern governmental hospitals of Gaza Strip; descriptive statistic include measure of mean, SD and percentage.

Table (4.2) shows the total nurses knowledge score regarding pediatric pain management with mean level of 69.1 and SD of 16.1, which reflects moderate level of knowledge. In this analysis the nurses were classified into three categories according to their scores, ≥ 80 % is high, between 60 - 79.9 % is moderate and < 60% is low. 19.5 % of nurses got high score and 41.4% of nurses got moderate score while 39.1% got low scores on the scale for

pain management knowledge. In summary, 60.9% of the participants got moderate to high score on the scale for pain management knowledge.

Table (4.2) Total nurses knowledge score of pediatric pain management (n=87)

Variable and level	n(%) 87(100)	Total nurses knowledge score			
		Min	Max	Mean(SD)	level
knowledge		20	100	69.1(16.1)	Moderate
High (80-100%)	17(19.5)				
Moderate (60-79.9%)	36(41.4)				
Low (less than 60%)	34(39.1)				

4.1.2.2. Participants responses to knowledge items:

The frequency and percentage of participants response to each item in the scale were calculated. Additional analysis was done to identify the areas where nurses was high or low knowledge. The highest percentage was given to the statements: pain should be assessed before and after administering pain drugs (89.7%); pain is unpleasant sensory and emotional experience associated with actual or potential tissue damage (87.4%); It was also found in some areas that nurses had low level of knowledge (score< 60%) concerning pediatric pain management, these included: physiological pain assessment is a more suitable method than behavioral and self-reporting assessment of pain in children (28.7%), (negative statement); non-pharmacological methods make pain more tolerable and give children a greater sense of control over painful situation (50.6%). See Table (4.3).

Table (4.3) Frequency distribution of the participants according to their responses about pediatric pain management knowledge items ranked in order (n=87)

Rank	Knowledge items	Yes n(%)	Don't know n(%)	No n(%)
1	Pain should be assessed before and after administering pain drugs.	78(89.7)*	0	9(10.3)
2	Pain is unpleasant sensory and emotional experience associated with actual or potential tissue damage.	76(87.4)*	3(3.4)	8(9.2)
3	Ask about pain regularly; assess pain systematically.	73(83.9)*	5(5.7)	9(10.3)
4	Ibuprofen and other non-steroidal anti-inflammatory agents are effective analgesics for mild to moderate pain.	72(82.8)*	7(8.0)	8(9.2)
5	Providing comfort, changing position and massage may help to reduce muscle tension which in turn, can reduce pain.	68(78.2)*	3(3.4)	16(18.4)
6	Children pain remains, under-diagnosed and under-treated and has significant physical, psychological, and financial consequences.	60(69)*	12(13.8)	15(17.2)
7	Distraction children by using music or story telling during the invasive procedure will help to decrease children pain	59(67.8)*	8(9.2)	20(23)
8	Giving narcotics on a regular schedule is preferred over as needed (PRN) schedule for continuous pain.	46(52.9)*	7(8.0)	34(39.1)
9	Non-pharmacological methods make the pain more tolerable and give children a greater sense of control over the painful situation.	44(50.6)*	7(8.0)	36(41.4)
10	Physiological pain assessment is a more suitable method than behavioral and self-reporting assessment of pain in children.	55(63.2)	7(8.0)	25(28.7)*

* Correct answer

4.1.3. Level of attitude regarding pediatric pain management:

4.1.3.1. Level of attitude:

Table (4.4) shows that the mean of nurses' attitude regarding pediatric pain management was 38.3 and SD of 13.1, which were at the low level. In this analysis the nurses were classified into three categories according to their scores, ≥ 80 % is high, between 60 - 79.9 % is moderate and < 60% is low. The zero percentage was found to have high score, 5.7% got moderate score, while 94.3% got low score.

Table (4.4) Total nurses level of attitudes toward pediatric pain management (n = 87)

Variable and level	n (%) 87(100)	Total nurses attitude score			
		Min	Max	Mean(SD)	level
Attitude		11.6	70.6	38.3(13.1)	Low
High (80-100%)	0(0.0)				
Moderate (60-79.9%)	5(5.7)				
Low (less than 60%)	82(94.3)				

4.1.3.2. Participants responses to attitude items:

The frequency and percentage of participants responses to each item in the scale were calculated. Additional analysis was done to determine the positive and negative nurses attitude (high or low attitude) toward pain management in children. It was found that nurses had positive attitudes in some areas, these included: pain is seen in the child behavior (86.2%); child family support necessary to relive their pain (77.0%). It was also found that nurses had low attitudes (score <60%) in some areas concerning pain management, these included: observable changes in vital signs must be relied on to verify child complain of severe pain; the legal processes required to obtain and administer narcotics makes it difficult to deliver effective pain management (11.5% repeated for each). See Table (4.5).

Table (4.5)Frequency distribution of participants according to their responses to pain management attitude ranked in order (n = 87)

Rank	Attitude items	Agree n (%)	Neutral n (%)	Disagree n (%)
1	Pain is seen in the child behavior.	75(86.2)*	10(11.5)	2(2.3)
2	Child family support necessary to relive their pain.	67(77.0)*	14(16.1)	6(6.9)
3	The nurses personal experience with pain affects the way the nurse manages pain on children.	57(65.5)*	23(26.4)	7(8.0)
4	When a child complains of pain the best management is to assess the genuineness of the pain.	54(62.1)*	26(29.9)	7(8)
5	Non-pharmacological interventions are very effective for mild to moderate pain.	47(54.0)*	30(34.5)	10(11.5)
6	The child may deny pain to avoid analgesia by painful route.	46(52.9)*	18(20.7)	23(26.4)
7	Pain management education received during nurse training is adequate for effective pain management post qualification.	42(48.3)*	30(34.5)	15(17.2)
8	Medical hospitalized children usually do not experience pain which is as intense as that experienced by surgical hospitalized children.	34(39.1)*	33(37.9)	20(23)
9	A child with medical health problem experience pain as often as a surgical child.	37(42.5)	24(27.6)	26(29.9)*
10	The use of placebo is important in determining if the child pain is real.	35(40.2)	27(31)	25(28.7)*
11	Because children are not medically educated cannot give a reliable report of their pain.	41(47.1)	23(26.4)	23(26.4)*
12	Using pain assessment tools usually makes nursing more complicated and consumes time for other ward activities	44(50.6)	25(28.7)	18(20.7)*
13	A child who can be distracted from pain usually do not have severe pain.	39(44.8)	37(42.5)	11(12.6)*
13	Nurses are best judges of the patient's pain intensity because they spend 24 hours with the patient.	49(56.3)	27(31)	11(12.6)*
15	A child who complains of pain often will be seeking staff attention	60(69.0)	17(19.5)	10(11.5)*
15	The legal processes required to obtain and administer narcotics makes it difficult to deliver effective pain management.	39(44.8)	38(43.7)	10(11.5)*
15	Observable changes in vital signs must be relied on to verify child complain of severe pain.	58(66.7)	19(21.8)	10(11.5)*

As shown in table (4.6), the weighted mean for the topic of the field of pain management attitude was 76% and significantly less than 0.05 by using one sample t-test, which means the participants agree about this topic. According to this results, the highest statement was; pain is seen in the child behavior with weighted mean 94.0%, followed by statement, child

family support necessary to relive their pain with weighted mean 88 %, while the lowest statement was; the use of placebo is important in determining if the child pain is real with weighted mean 64% followed by statement; medical hospitalized children usually do not experience pain which is as intense as that experienced by surgical hospitalized children and statement; a child with medical health problem experience pain as often as surgical child with weighted mean 66% for each.

Table (4.6) Weighted percentage according to the mean of participants response to pain management attitude items ranked in order (n = 87)

Rank	Items	Mean(SD)	%	t	P-value
1	Pain is seen in the child behavior.	**4.7(0.9)**	**94**	18.290	0.000
2	Child family support necessary to relive their pain.	4.4(1.2)	88	11.031	0.000
3	When a child complains of pain the best management is to assess the genuineness of the pain.	4.1(1.3)	82	7.831	0.000
3	A child who complain of pain often will be seeking staff attention.	4.1(1.4)	82	7.739	0.000
3	The nurses personal experience with pain affects the way the nurse the nurse manages pain on children.	4.1(1.3)	82	8.371	0.000
3	Observable changes in vital signs must be relied on to verify child complain of severe pain.	4.1(1.4)	82	7.407	0.000
7	Non-pharmacological interventions are very effective for mild to moderate pain, not severe pain.	3.9(1.4)	78	5.727	0.000
7	Nurses are best judges of the patient's pain intensity because they spend 24 hours with the patient.	3.9(1.4)	78	5.735	0.000
9	The legal processes required to obtain and administer narcotics makes it difficult to deliver effective pain management.	3.7(1.4)	74	4.597	0.000
10	A child who can be distracted from pain usually do not have severe pain.	3.6(1.4)	72	4.348	0.000
10	Using pain assessment tools usually makes nursing more complicated and consumes time for other ward activities.	3.6(1.6)	72	3.510	0.001
10	Pain management education received during nurse training is adequate for effective pain management post qualification.	3.6(1.5)	72	3.850	0.000
13	The child may deny pain to avoid analgesia by painful route.	3.5(1.7)	70	2.883	0.005
14	Because children are not medically educated cannot give a reliable report of their pain.	3.4(1.7)	68	2.305	0.024
15	Medical hospitalized children usually do not experience pain which is as intense as that experienced by surgical hospitalized children.	3.3(1.6)	66	1.935	0.056
15	A child with medical health problem experience pain as often as a surgical child.	3.3(1.7)	66	1.393	0.167
17	The use of placebo is important in determining if the child pain is real.	3.2(1.7)	64	1.296	0.198
	Total	**3.8(0.6)**	**76**	**13.497**	**0.000**

4.1.4. Level of practice regarding pediatric pain management:

4.1.4.1. Level of practice:

The results in Table (4.7) indicate that the overall level of pediatric pain management practice among nurses was 63.7 and it is considered as moderate level. Also it was found that nearly half of nurses demonstrate moderate practice level (48.3%), (36.8%) demonstrate high level and (14.9%) demonstrate low level of practice.

Table (4.7) Total nurses practice level of pediatric pain management (n=87)

Variable and level	n (%) 87(100)	Total nurses practice score			
		Min	Max	Mean(SD)	level
Practice		35.8	92.6	63.7 (14.2)	Moderate
High (80-100)	32(36.8)				
Moderate (60-79.9)	42(48.3)				
Low (less than 60)	13(14.9)				

4.1.4.2. Participants responses to practice items:

The frequency and percentage of participants responses to each item in the scale were calculated. Additional analysis was done determine the areas where nurses constantly or never perform to manage pain in their clinical practice. It was found that nurses reported that there were methods they constant practiced on pain management. These included: they observe the following side effect such as respiratory distress, urticaria, nausea, vomiting, if a child receive opioids drug; they administer pain medication to children by own judgment (negative statement); after surgery they provide comfortable position to help relive children pain (26.4% repeated for each). It was also found that nurses reported that there were methods they never practiced in providing care for children who had pain, these included: after surgery they observe the behavioral change in children (such as being

awake, crying, limit body movement, withdrawal, agitation, or not talking) in order to assess their pain (21.8%); they assess children pain at least once a shift (18.4%); they observe the side effect of pain medication (such as morphine) after giving it to the child (16.1%). See Tables (4.8.A, 4.8.B).

Table (4.8.A) Frequency distribution of the participants according to their responses to pain management practice items ranked in order (n=87)

Rank	Item	n (%) Never	n (%) Infrequently	n (%) Occasionally	n (%) Frequently	n (%) Constantly
1	You observe the following side effect such as respiratory distress, urticaria, nausea, vomiting if a child receive opioids drug	6(6.9)	12(13.8)	25(28.7)	21(24.1)	23(26.4)
1	You administer pain medication to children by your own judgment.	23(26.4)	14(16.1)	23(26.4)	19(21.8)	8(9.2)
1	After surgery you provide comfortable position to help relive children pain.	3(3.4)	14(16.1)	25(28.7)	22(25.3)	23(26.4)
4	You observe the side effect of pain medication (such as morphine) after giving it to the child	14(16.1)	15(17.2)	18(20.7)	20(23)	20(23)
4	You reassess children pain after giving pain medication in order to evaluate the effectiveness of pain medication	6(6.9)	11(12.6)	24(27.6)	26(29.9)	20(23)
6	You often tell children to tell the nurse when they are in pain	6(6.9)	14(16.1)	24(27.6)	24(27.6)	19(21.8)
7	You administer pain medication to children as ordered by a doctor around the clock.	9(10.3)	14(16.1)	28(32.2)	19(21.8)	17(19.5)
7	You ask and help children to support the painful areas when moving or coughing after surgery.	10(11.5)	11(12.6)	23(26.4)	26(29.9)	17(19.5)
9	After surgery, you observe the behavioral change in children (such as being awake, crying, limit body movement, withdrawal, agitation, or not talking) in order to assess their pain.	19(21.8)	12(13.8)	17(19.5)	23(26.4)	16(18.4)
10	You arrange the environment to be calm and quiet in order to help children sleep easily.	9(10.3)	13(14.9)	27(31)	23(26.4)	15(17.2)
10	You advised parents and give them opportunities to help in reducing their children pain.	7(8.0)	10(11.5)	27(31)	28(32.2)	15(17.2)

Table (4.8.B) Frequency distribution of the participants according to their responses to pain management practice items ranked in order (n=87)

Rank	Item	n (%) Never	n (%) Infrequently	n (%) Occasionally	n (%) Frequently	n (%) Constantly
12	You use a behavioral pain scale such as FLACC (Face, Legs, Activity, Cry, and Consolability) for assessment of young children pain in your practice.	6(6.9)	24(27.6)	25(28.7)	18(20.7)	14(16.1)
12	You administer additional pain medication to relive pain when needed (PRN or SOS)	12(13.8)	18(20.7)	28(32.2)	15(17.2)	14(16.1)
14	You talk with children with a soft voice to comfort them when they are in pain.	10(11.5)	11(12.6)	21(24.1)	32(36.8)	13(14.9)
15	You observe the physiological change in children (such BP, respiration rate, heart rate, temperature, or O2saturation) in order to assess their pain.	9(10.3)	23(26.4)	23(26.4)	21(24.1)	11(12.6)
15	You assess children pain at least once a shift	16(18.4)	13(14.9)	26(29.9)	21(24.1)	11(12.6)
17	You ask a parent to be involved in assessing their children pain (such as asking children if he /she has pain by using familiar word and language).	7(8.0)	13(14.9)	26(29.9)	31(35.6)	10(11.5)
18	You distract children from pain by using several techniques (such as giving them a toy for playing, listen to music, telling stories touching them.)	11(12.6)	17(19.5)	34(39.1)	18(20.7)	7(8)
19	You use self-reporting pain scale (such as visual analog scale, FACE scale) for the assessment of children pain in practice	13(14.9)	20(23)	28(32.2)	22(25.3)	4(4.6)

In addition, one sample t-test was used to determine the areas that nurses constantly perform at high to low level to manage pain in their clinical practice. The weighted mean for the topic of the field of pain management practice was 66% and significantly less than 0.05, which means the participants agree about this topic. According to this results, the highest statement was; after surgery they provide comfortable position to help relieve children pain with weighted mean 72%, followed by statement, they observe the following side effect such as respiratory distress, urticaria, nausea, vomiting, if a child receive opioids drug with weighted mean 70 %, while the lowest statement was, they administer pain medication to children by own judgment with weighted mean 54% followed by

statement, they use self-reporting pain scale (such as visual analog scale) for the assessment of children pain in practice with weighted mean 56 %. See Table (4.9)

Table (4.9) Weighted percentage according to the mean of participants response to pain management practice items ranked in order (n = 87)

Rank	Item	Mean (SD)	%	t	P-value
1	After surgery, you provide a comfortable position to help relive children pain.	3.6(1.1)	72	4.479	0.000
2	You observe the following side effect such as respiratory distress, vomiting if a child receive opioids drug	3.5(1.2)	70	3.783	0.000
2	You reassess children pain after giving pain medication.	3.5(1.2)	70	3.907	0.000
4	You advised parents and give them opportunities to help in reducing their children pain.	3.4(1.1)	68	3.184	0.002
4	You often tell children to tell the nurse when they are in pain	3.4(1.2)	68	3.226	0.002
6	You ask a parent to be involved in assessing their children pain (such as asking children if he /she has pain by using familiar word and language).	3.3(1.1)	66	2.324	0.022
6	You talk with children with a soft voice to comfort them when they are in pain.	3.3(1.2)	66	2.386	0.019
6	You arrange the environment to be calm and quite in order to help children sleep easily.	3.3(1.2)	66	1.945	0.055
6	You ask and help children to support the painful areas when moving or coughing after surgery.	3.3(1.3)	66	2.478	0.015
10	You administer pain medication to children as ordered by a doctor around the clock.	3.2(1.2)	64	1.818	0.073
10	You observe the side effect of pain medication (such as morphine) after giving it to the child	3.2(1.4)	64	1.305	0.195
12	After surgery, you observe the behavioral change in children (such as being awake, crying) in order to assess their pain.	3.1(1.4)	62	0.376	0.708
12	You use a behavioral pain scale such as FLACC (Face, Legs, Activity, Cry, and Consolability) for assessment of young children pain in your practice.	3.1(1.2)	62	0.904	0.368
14	You observe the physiological change in children (such BP, respiration rate, heart) in order to assess their pain.	3.0(1.2)	60	0.179	0.859
14	You assess children pain at least once a shift	3.0(1.3)	60	0.167-	0.868
14	You administer additional pain medication to relieve pain when needed (PRN or SOS)	3.0(1.3)	60	0.085	0.933
17	You distract children from pain by using several techniques (such as giving them a toy, telling stories, touching them.)	2.9(1.1)	58	0.675-	0.502
18	You use self-reporting pain scale (such as visual analog scale, FACE scale)for the assessment of children pain	2.8(1.1)	56	1.537-	0.128
19	You administer pain medication to children by your own judgment.	2.7(1.3)	54	2.031-	0.045
	Total	**3.2(0.7)**	**66**	**2.485**	**0.015**

4.1.5. The factors that influence KAP:

There are many factors influence on nurses KAP. In this study the researcher examine the relation between socio-demographic variable and nurses KAP regarding pediatric pain management.

4.1.5.1. Level of KAP and gender:

Table (4.10) shows no statistically significant differences between nurses KAP and gender (P >0.05).

Table (4.10) The relation between KAP and gender

Variable Gender		n	Mean	SD	t	P-value
Knowledge	Male	23	70.0	13.5	0.317	0.752
	Female	64	68.8	17.0		
Attitude	Male	23	36.6	11.6	0.721-	0.473
	Female	64	38.9	13.6		
Practice	Male	23	60.1	14.6	1.463-	0.147
	Female	64	65.1	13.9		
Total (KAP)	Male	23	55.6	9.6	0.782-	0.437
	Female	64	57.6	11.0		

4.1.5.2. Level of KAP and educational qualification:

The results show in Table (4.11) that there are no statistically significant differences between participants level of education and their knowledge, practice and KAP as the total (P>0.05). Conversely, there are statistical differences between attitude and educational qualification (P≤0.05).

Table (4.11) The relation between KAP and educational qualification

Variable	**Educational qualification.**	**n**	**Mean(SD)**	**F**	**P-value**
Knowledge	Diploma	26	66.4(14.7)	0.386	0.763
	Bachelor	57	70.4(16.1)		
	Master	4	70.0(21.6)		
	Total	87	69.1(16.1)		
Attitude	Diploma	26	34.1(11.3)	2.985	0.036
	Bachelor	57	40.9(13.1)		
	Master	4	36.8(16.2)		
	Total	87	38.3(13.1)		
Practice	Diploma	26	57.6(12.2)	2.564	0.060
	Bachelor	57	66.1(13.7)		
	Master	4	70.8(23.9)		
	Total	87	63.8(14.2)		
Total	Diploma	26	52.7(9.5)	2.681	0.052
	Bachelor	57	59.1(9.9)		
	Master	4	59.2(18.5)		
	Total	**87**	**57.0(10.6)**		

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4.1.5.3. Level of KAP and current position:

Table (4.12) shows no statistically significant relationship between current position and participants KAP. This means that different in nursing positions do not affect KAP regarding pediatric pain management.

Table (4.12) The relation between KAP and current position

Variable / **Current position**		**n**	**Mean**	**SD**	**F**	**P-value**
Knowledge	Bedside nurse	72	68.8	16.4	0.703	0.498
	Senior nurse	8	75.0	14.1		
	Head nurse	7	65.7	15.1		
	Total	87	69.1	16.1		
Attitude	Bedside nurse	72	38.6	13.5	0.136	0.873
	Senior nurse	8	36.0	11.5		
	Head nurse	7	37.8	12.2		
	Total	87	38.3	13.1		
Practice	Bedside nurse	72	63.7	14.2	0.150	0.861
	Senior nurse	8	66.1	15.5		
	Head nurse	7	62.1	14.6		
	Total	87	63.7	14.2		
Total	Bedside nurse	72	57.0	10.9	0.240	0.787
	Senior nurse	8	59.0	10.6		
	Head nurse	7	55.2	8.5		
	Total	87	57.0	10.6		

4.1.5.4. Level of KAP and working department:

Table (4.13) shows no statistically significant relationship between working departments and participants KAP. This means that different in working departments do not affect KAP regarding pediatric pain management.

Table (4.13) The relation between KAP and working department

Variable / **Working department**		**n**	**Mean**	**SD**	**F**	**P-value**
Knowledge	Emergency	21	67.1	13.1	0.239	0.788
	Medical	52	70.0	16.3		
	Surgical	14	68.6	19.9		
Attitude	Emergency	21	38.9	9.6	0.057	0.945
	Medical	52	38.2	14.6		
	Surgical	14	37.4	12.8		
Practice	Emergency	21	65.7	14.0	0.349	0.707
	Medical	52	62.8	14.7		
	Surgical	14	64.7	13.0		
KAP	Emergency	21	57.2	8.4	0.006	0.994
	Medical	52	57.0	11.6		
	Surgical	14	56.9	10.3		

4.1.5.5. Level of KAP and age, experience as a nurse and experience in pediatric department:

From the Table (4.14) the results shows that there are no statistically significant correlation between participants KAP and age, experience as a nurse and experience in pediatric departments(P>0.05).

Table (4.14) The correlation between KAP and age, experience as a nurse and experience in pediatric department.

Variables	Knowledge		Attitude		Practice		Total	
	r	P-value	r	P-value	r	P-value	r	P-value
Age (years)	-0.034	0.752	-0.091	0.404	0.051	0.643	-0.032	0.766
Experience as a nurse (years)	-0.047	0.663	-0.116	0.286	0.052	0.631	-0.048	0.656
Experience in pediatric departments (years)	0.060	0.582	0.041	0.705	0.165	0.126	0.121	0.265

4.1.6. The correlation between KAP among participants:

The results in Table (4.15) shows that there are positive statistically significant correlation between knowledge and attitude. Also, there are positive significant correlation between attitude and practice. Conversely, no significant correlation between knowledge and practice among the participants.

Table (4.15) The correlation between KAP among the participants.

	Knowledge		Attitude		Practice		Total	
	r	P-value	r	P-value	r	P-value	r	P-value
Knowledge	-	-	**0.405**	**0.000**	**0.143**	**0.185**	0.737	0.000
Attitude	**0.405**	**0.000**	-	-	**0.387**	**0.000**	0.789	0.000
Practice	**0.143**	**0.185**	**0.387**	**0.000**	-	-	0.678	0.000

4.2 Discussion

4.2.1. Level of knowledge, Attitude and Practice:

The mean for the 87 nurses' knowledge regarding pediatric pain management was 69.1, with SD of 16.1. About thirty six nurses (41.4%) were found to have moderate level of knowledge, while 17 (19.5%) of them have high level of knowledge and 34 (39.1%) of them found to have low level of knowledge regarding pediatric pain management. These results indicated that the level of pain management knowledge among nurses who working at pediatric departments in southern governmental hospitals of Gaza Strip was relatively moderate. These findings matched with the study of Hossain, (2010), where the main results of the study have shown that the level pain management knowledge was at the moderate level (66 %). Also, matched to the results of study done by Rieman and Gordon (2007), which evaluated knowledge in pain management and assessment among nurses from eight pediatric hospitals in Cincinnati, USA, which indicated that pediatric nurses had moderate knowledge level regarding pain management (74%).

On the other hand, the findings disagree with the results of Smeland, et al., (2018), the study analyzed Norway nurses knowledge about pain management in children, and revealed that the Norway nurses had knowledge deficits regarding pain management in children. Also, another study results disagree with current findings Ortiz, et al., (2015), which indicated that the degree of knowledge about pain and its treatment was very low.

From the above results, it was clear that some studies reflected moderate level of knowledge and were consistent with the results of this study, while other studies revealed knowledge deficit. Variations in results could be attributed to different settings as most of the studies that reflected lower knowledge were conducted in developing or in Arab

countries such as (Ortiz, et al., 2015; Jin, 2015; Nuseir, et al., 2016; Al Omari, 2015; Samarkandi, 2018).

The mean of the participants attitude regarding pediatric pain management was 38.3, SD 13.1, with range from 11.6 to 70.6. About eighty two nurses (94.3 %) were found to have low level of attitude, while no one had high level of attitude regarding pediatric pain management. These results indicated that the level of pain management attitude among nurses who working at pediatric departments in southern governmental hospitals of Gaza Strip was at the low level. These findings agree with several studies (Jin, 2015; Patnaik, et al., 2017; Gadallah, et al., 2017; Ortiz, et al., 2015) these studies results revealed that nurses attitudes regarding pediatric pain management was at the low level.

In contrast, a study conducted by Peirce, et al., (2018), on 590 pediatric nurses in Western Australia, revealed that nurses had positive attitude toward pediatric pain management. These variation in attitude towards pain management are due to differences in communities culture on how they look at pain management and if they consider it as a priority or not.

From the 19 questions assessed the level of practice, the mean of correctly answered questions was 63.7, and SD 14.2. About 42 (48.3%) of participants had moderate pain management practice, whereas only 32 (36.8%) had high pain management practice. These results indicated that the level of pain management practice among nurses who working at pediatric departments in southern governmental hospitals of Gaza Strip was relatively moderate. These results agree with the study of Hossain, (2010) on existing level of knowledge, attitudes, and practice regarding post-operative pediatric pain management in Bangladesh, which revealed moderate level of pain management practice among nurses. Also agree with the study done by Vincent, (2005) which describe nurses practice of pain management in children, the results of the study indicated that the majority of participants demonstrated moderate level of practice about pain management in children.

Patnaik, et al., (2017) study, conducted on 40 nurses in India to evaluate the practices of pediatric pain management among nursing personnel, and revealed a deficiency in the practices regarding pain management in children, these results not agree with the results of current study. Also, another study results disagree with current results Smeland, et al., (2018), conducted on 193 nurse in Norway to identify nurses clinical practice of pediatric postoperative pain management, which revealed poor performance regarding the assessment and relief of pain. The differences in level of practice regarding pediatric pain management between countries is attributed to the different habits and due to variation in attitude toward pain management.

4.2.2. The factors that influence KAP:

The results showed that there is no statistically significant differences between the participants gender and level of KAP. The mean of knowledge was 70.0 for male and 68.8 for female nurses with significance value was 0.752 which is not significant. In attitude the mean was 36.6 for male and 38.9 for female nurses with significance value was 0.473. In practice the mean was 60.1 for male and 65.1 for female nurses with significance value was 0.147. This means that different of gender do not affect KAP regarding pediatric pain management. This results due to the specialty of the area (GS) where no variation in culture. Similar results were obtain in study conducted in Jordon by Al Omari, (2015), which indicated that there is no significant difference in the mean score of knowledge in relation to gender. But in contrast to the results of Samarkandi, (2018) where there was a significant difference in the mean score of knowledge and attitude in relation to gender and females nurse had higher mean score than male nurse.

Also, there was no statistically significant differences between the educational qualification and their knowledge and practice and KAP as the total. In attitude significance value was 0.036, which reflect that there a statistically significant differences

between attitude and educational qualification. This means that different levels of education do not affected on knowledge and practice but affected on attitude regarding pediatric pain management. The researcher clarifies that during nurses education in university don't found courses that focus on pediatric pain management. Another explains that these nurses are busy and don't have more time to ask or search about pediatric pain management. In this regard, several other studies share similar findings (Al Omari, 2015; Nimer & Ghrayeb, 2017), these studies results indicated that no significant correlation between level of education, and nurses level of knowledge about pain management. Also the findings of a study done in Australia by Peirce, et al., (2018) matched with current findings, which showed a positive correlation between educational qualification and attitudes towards pain management, and nurses with specialist pediatric qualifications had significantly more positive attitude scores. In contrast, there are several studies contradicted with current study findings are (Miftah. et al., 2017; Stanley& Pollard., 2013), these studies indicated that the nurses with an educational level of master degree or higher and those with bachelor had a statistically significantly higher knowledge score than nurses with an associate degree.

The results showed that there is no statistically significant differences between current position and participants KAP. This means that different in nursing position do not affected on KAP regarding pediatric pain management. This results due to no variation between sample populations. Similar findings were obtain in study conducted by Rieman and Gordon, (2007), which indicated that there is no significant difference in the mean score of knowledge and attitude in relation to nursing position. The current findings are in contrast to findings of Peirce, et al., (2018), where they found that senior registered nurses had the most positive mean attitude score, which was significantly higher than clinical nurses.

The results of this study also showed that there is no statistically significant differences between working departments and participants KAP. This means that different in working departments do not affected on KAP regarding pediatric pain management. The researcher clarifies this results are due to no protocols guide pain management in each department. Similar results were obtain in study conducted by Nuseir, et al., (2016), which indicated that there is no statistically significant difference in the level of knowledge among different wards. In contrast, the current findings disagree with the results of (Peirce, et al., 2018; D'emeh, et al., 2016), these studies indicated that there is significant difference in the mean score of knowledge in relation with working departments, and nurses who working in critical care unit and surgical units had significantly higher mean knowledge scores.

In this study, the quantitative findings showed that there is no significant correlation between KAP and age, experience as a nurse and experience in pediatric department. The researcher clarifies this result due no educational and training program for pediatric pain management in hospital. These results are consistent with the results of Stanley & Pollard, (2013), which suggested that there is no statistically significant relationship between knowledge and years of nursing experience. At the same time, this study also showed that there is a statistically significant relationship between the level of knowledge and the years of pediatric experience and years of pediatric nursing experience correlated with significantly higher knowledge levels, this findings disagree with current study findings. A study conducted by D'emeh, et al., (2016), revealed that nurses age did not have an effect on knowledge and attitude regarding pediatric pain management, these results agree with current findings. Also, Turkish study confirm current study findings Yava, et al., (2013), this study did not find any significant differences in pain management knowledge among nurses for variables such as nurses age groups and nursing experience years. In the study of Miftah, et al., (2017), showed significant association between experience in caring for

hospitalized children, and knowledge, this findings not match with current findings. It was clear that current results were consistent with most of the previous studies especially in nurses age and work experience which reflected no effect on pain managment.

4.2.3. The correlation between KAP among the participants:

The results reflected that there a positive relationship between nurses knowledge and attitudes regarding pediatric pain management. Also, there is positive relationship between attitude and practice. Conversely, no statistically significant correlation between knowledge and practice. These findings agreed with (Smeland, et al., 2018; Hossain, 2010), which indicated that the relationship between knowledge and practice was not correlated. Findings of a study done in Zimbabwe by Manwere, et al., (2015) showed a positive correlation between knowledge and attitudes towards pain management, these findings consistent with current study findings. In contrast, the current findings disagree with the results of (Kholowa, et al., 2017; Miller, 2012; Noghabi, et al., 2014), where they showed that nurses may have very positive attitudes towards pain management without sufficient knowledge to effectively manage pain. The contradiction between previous studies findings creates a gray area to further investigate the impact of these variables on nursing knowledge, attitude and practice.

Chapter five

Conclusion and Recommendations

In this chapter, the major findings of current study reviewed and answers to research questions will be given, in addition, recommendations will be provided.

5.1 Conclusion

The study findings showed that nurses had moderate levels of knowledge with mean knowledge score of 69.1 and low attitude level with mean attitude score of 38.3, also a moderate level of practices with mean practice score of 63.7. Knowledge, attitude and practice of pain management was not associated with socio-demographic variable such as age, gender, educational qualification, current position, working departments, experience as a nurse, experience in pediatric department. Additional, the findings established a positive relationship between nurses knowledge and attitudes, and also positive relationship between attitude and practice. Conversely, no statistically significant correlation between knowledge and practice of pain management in children

The main areas of concern were the lack of knowledge on pain assessment and management as 63.2% of the participants failed to give correct tools used for pain assessment, 39.1% failed to giving narcotics on a regular schedule. Only 50.6 % correctly identified the advantages of non-pharmacological pain management measures. Disbelieve and negative attitude about children pain was noted amongst most of the nurses with 66.7% reporting the need to observe changes in vital signs to verify child complain of severe pain and 69.0 % reporting that child complain of pain to seeking staff attention. In regard to practice, only 8% reporting constantly distract children from pain by using several techniques and 4.6 % reporting constantly use self-reporting pain for the assessment of children pain in practice. This could contribute to poor pain management.

5.2 Recommendations

1. There is a need to design and implement a continuous professional education program on pediatric pain management in hospitals and the findings from the study help inform specific areas that need educational intervention.
2. The findings of this study should be a basis for future planning and policy making of nursing administration in GS.
3. MoH should formulate protocol that guide pain management in pediatric departments in hospitals.
4. Further research is necessary to measure the level of pain management knowledge, attitude and practice of nurses from all different Gaza governorate to be more generalized and more representative.

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Annexes:

Annex (A): Participants consent form

Consent Form

Questionnaire for data collection on Knowledge, attitude and practices among nurses regarding pediatric pain management in southern governmental hospitals of Gaza Strip.

Greeting:

My name is Atef Salem Abu Amra. I am conducting a research regarding pain management among pediatric nurses'. This research is an essential part of my master program in pediatric nursing at Al-Quds University. You have been chosen to be one member of the study sample, your participation is not obligatory, but your involvement is highly appreciated. The objective of this study is to examine current knowledge, attitudes and practice among nurses regarding pain management in children, which is important to improve the nursing services. Your cooperation and willingness for completing the questionnaire is helpful in identifying problems related to the subject matter. Your name will not be written in this form. All information that you give will be kept strictly confidential. Do I have your permission to fill the questionnaire?

Agree Disagree

If you are interested in the results of this research, or have any other questions, feel free to contact me

Atef Salem Abu Amra
Jawwal, 0592601369.
G-mail: atefamra442@gmail.com

Annex (B): List of experts

1.	Assist. Prof. Dr. Hamza Abdeljawad. ,	Program Coordinators Faculty of Health Professions, Al-Quds University-Gaza, Palestine.
2.	Assist. Prof. Dr. Areefa Al- Bahri	Head of Midwifery Department, Islamic University-Gaza, Palestine.
3.	Assist. Prof. Dr. Ahmed A. Najim	Head of Nursing Department, Al Azhar University-Gaza, Palestine.
4.	Assist. Prof. Dr. Mohamed Jerjawy	Head of Practical Training, Palestine College of Nursing-Gaza, Palestine.
5.	Assist. Prof. Dr. Motasem Salah	Head of Nursing Department, University College of Applied Science Gaza, Palestine.

Annex (C): Socio demographic characteristics of the participants.

1. Hospital ……
2. Working department

    - Emergency department
    - Medical department
    - Surgical department

3. Age (years)……
4. Gender

    - Male
    - Female

5. How many years have you been working as a nurse.....?
6. Years of experience in pediatric department.....
7. Educational qualification.

    - Diploma
    - BSN
    - MSN
    - Other specify ……..

8. Current position.

    - Bed side nurse
    - Senior staff nurse
    - Head nurse
    - Nursing supervisor

Annex (D): Knowledge, attitude and practice questionnaires.

Knowledge towards Pain management

Direction: Please put (✓) in the column you chosen.

NO	Parameter	Response		
		Yes	**No**	**Don't know**
1.	Pain is unpleasant sensory and emotional experience associated with actual or potential tissue damage			
2.	Pain should be assessed before and after administering pain drugs.			
3.	Physiological pain assessment is a more suitable method than behavioral and self-reporting assessment of pain in children.			
4.	Ask about pain regularly; assess pain systematically			
5.	Children's pain remains, under-diagnosed and under-treated and has significant physical, psychological, and financial consequences.			
6.	Giving narcotics on a regular schedule is preferred over as needed (PRN) schedule for continuous pain			
7.	Ibuprofen and other non-steroidal anti-inflammatory agents are effective analgesics for mild to moderate pain.			
8.	Providing comfort, changing position and massage may help to reduce muscle tension which in turn, can reduce pain.			
9.	Distraction children by using music or story telling during invasive procedure will help to decrease children pain			
10.	Non-pharmacological methods make pain more tolerable and give children a greater sense of control over painful situation			

Attitude towards Pain management

Direction: Please put (✓) in the column you chosen.

NO	Parameter	Response		
		Agree	**Neither Agree Nor Disagree**	**Disagree**
1.	Pain is seen in the child behavior			
2.	Child who can be distracted from pain usually do not have severe pain			
3.	Non-pharmacological interventions are very effective for mild to moderate pain not severe pain.			
4.	The use of placebo is important in determining if the child pain is real.			
5.	Medical hospitalized children usually do not experience pain which is as intense as that experienced by surgical hospitalized children.			
6.	When a child complains of pain the best management is to assess the genuineness of the pain.			
7.	Using pain assessment tools usually makes nursing more complicated and consumes time for other ward activities.			
8.	Child who complain of pain often, will be seeking staff attention.			
9.	The nurses' personal experience with pain affects the way the nurse the nurse manages pain on children.			
10.	Observable changes in vital signs must be relied on to verify child complain of severe pain.			
11.	Pain management education received during nurse training is adequate for effective pain management post qualification.			
12.	The legal processes required to obtain and administer narcotics makes it difficult to deliver effective pain management.			

13.	Nurses are best judges of the patient's pain intensity because they spend 24 hours with the patient.			
14.	A child with medical health problem experience pain as often as surgical child.			
15.	Because children are not medically educated cannot give a reliable report of their pain.			
16.	Child family support is necessary to relive their pain.			
17.	The child may deny pain to avoid analgesia by painful route.			

Pain management practice

Direction: Please consider the following behaviors as they relate to your practice. You should consider your reaction to each behavior and mark the rating accordingly.

NO	Parameter	Response				
	Codes: (1) Never (2) Infrequently (3) Occasionally (4) Frequently (5) Constantly					
1.	After surgery you observe behavioral change in children (such as being awake, crying, limit body movement, withdrawal, agitation, or not talking) in order to assess their pain.	1	2	3	4	5
2.	You observe physiological change in children (such BP, respiration rate, heart rate, temperature, or O2saturation) in order to assess their pain.	1	2	3	4	5
3.	You assess children pain at least once a shift	1	2	3	4	5
4.	You use self-reporting pain scale (such as visual analog scale (VAS), FACE scale) for the assessment of children pain in practice	1	2	3	4	5
5.	You use a behavioral pain scale such as FLACC (Face, Legs, Activity, Cry, and Consolability) for assessment of young children pain in your practice.	1	2	3	4	5
6.	You administer pain medication to children as order by a doctor around the clock.	1	2	3	4	5
7.	You observe the side effect of pain medication (such as morphine) after giving it to the child	1	2	3	4	5
8.	You observe the following side effect such as respiratory distress, urticaria, nausea, vomiting, if a child receive opioids drug.	1	2	3	4	5
9.	You administer pain medication to children by your own judgment.	1	2	3	4	5
10.	You administer additional pain medication to relive pain when needed (PRN or SOS)	1	2	3	4	5
11.	You reassess children pain after giving pain medication in order to evaluate the effectiveness of pain medication	1	2	3	4	5
12.	You distract children from pain by using several techniques	1	2	3	4	5

	(such as given them toy for playing, listen to music, telling stories touching them.)					
13.	You talk with children with a soft voice to comfort them when they are in pain.	1	2	3	4	5
14.	You arrange the environment to be calm and quite in order to help children sleep easily.	1	2	3	4	5
15.	You advise parents and give them opportunities to help in reducing their children pain.	1	2	3	4	5
16.	You ask parent to be involved in assessing their children pain (such asking children if he /she has pain by using familiar word and language).	1	2	3	4	5
17.	After surgery you provide comfortable position to help relive children pain.	1	2	3	4	5
18.	You often tell children to tell the nurse when they are in pain.	1	2	3	4	5
19.	You ask and help children to support the painful areas when moving or coughing after surgery.	1	2	3	4	5

Annex (E): Helsinki Committee approval letter

المجلس الفلسطيني للبحث 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/317/18

Name: ATEF S. ABUAMRA الاسم:

We would like to inform you that the committee had discussed the proposal of your study about:

نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:

Knowledge, attitude and practices among nurses regarding pediatric pain management in south governmental hospitals of Gaza Strip.

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/317/18 in its meeting on 05/02/2018

و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

Signature

Member **Chairman** **Member**

5/2/2018

Genral 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

Annex (F): Al-Quds University approval Letter

Al Quds University
Faculty of Health Professions
Nursing Dept. –Gaza

جامعة القدس
كلية المهن الصحية
دائرة التمريض – غزة

التاريخ:2018/3/17

حضرة الدكتور/ رامي العبادلة المحترم
مدير عام تنمية القوى البشرية–وزارة الصحة

تحية طيبة وبعد،،،

الموضوع: مساعدة الطالب عاطف سالم ابو عمره

نشكر لكم دعمكم الدائم لمسيرة العلم والتعليم نود أعلامكم بأن الطالب المذكور أعلاه يقوم بعمل بحث كمتطلب للحصول على درجة الماجستير في التمريض–تخصص تمريض أطفال بعنوان:

"Knowledge, attitude and practices among nurses regarding pediatric pain management in south governmental hospitals of Gaza Strip"

وعليه نرجو من سيادتكم التكرم بالموافقة على تسهيل مهمة الطالب في إنجاز هذا البحث حيث أن عينة الدراسة هي من فئة الممرضين والممرضات العاملين في أقسام الأطفال بمستشفيات وزارة الصحة التابعة لإدارتكم في جنوب القطاع.

وتفضلوا بقبول وافر الاحترام والتقدير

17/3/2018

د. حمزة محمد عبد الجواد
أستاذ مساعد في علوم التمريض
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Annex (G): Ministry of health permission letter

State of Palestine
Ministry of health

دولة فلسطين
وزارة الصحة

التاريخ:29/03/2018
رقم المراسلة 205112

السيد : رامي عيد سليمان العبادله المحترم

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

السلام عليكم ,,,

الموضوع/ تسهيل مهمة الباحث// عاطف أبوعمرة

التفاصيل //
بخصوص الموضوع أعلاه، يرجي تسهيل مهمة الباحث/ عاطف سالم أبوعمرة
الملتحق ببرنامج ماجستير التمريض – تخصص تمريض أطفال- جامعة القدس أبوديس في إجراء بحث بعنوان:-
"Knowledge, attitude and practices among nurses regarding pediatric pain management in south governmental hospitals of Gaza Strip"
حيث الباحث بحاجة لتعبئة استبانة من عدد الممرضين العاملين في اقسام الباطنة والجراحة والطوارئ في مجمع ناصر الطبي ومستشفى غزة الأوربي ومستشفى أبو يوسف النجار، 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 اخلاقيات البحث الصحي
ملاحظة / تسهيل المهمة الخاص بالدراسة أعلاه صالح لمدة 5 شهر من تاريخه.

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

التحويلات

■ محمد ابراهيم محمد السرساوي(مدير دائرة)	← رامي عيد سليمان العبادله(مدير عام بالوزارة)	إجراءاتكم بالخصوص(29/03/2018)
■ رامي عيد سليمان العبادله(مدير عام بالوزارة)	← عبد اللطيف محمد محمد الحاج(مدير عام بالوزارة)	إجراءاتكم بالخصوص(01/04/2018)
■ عبد اللطيف محمد محمد الحاج(مدير عام بالوزارة)	← محمد خليل محمد زقوت(مدير)	إجراءاتكم بالخصوص(01/04/2018)
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■ محمد خليل محمد زقوت(مدير)	← بيان مصباح غانم شراب(مدير صيدلية)	للعلم(01/04/2018)
■ محمد خليل محمد زقوت(مدير)	← علاء الدين محمود فايز المصري(طبيب رئيس قسم)	للعلم(01/04/2018)
■ محمد خليل محمد زقوت(مدير)	← وليد عبد احمد ابوحطب(طبيب مسجل مساعد / ممارس عام)	للعلم(01/04/2018)
■ محمد خليل محمد زقوت(مدير)	← ايمن خالد عثمان الفرا(طبيب مقيم)	للعلم(01/04/2018)
■ محمد خليل محمد زقوت(مدير)	← صبحي محمد زيدان قشطه(مدير)	للعلم(01/04/2018)
■ محمد خليل محمد زقوت(مدير)	← صوفيا شحده محمود زعرب(مدير)	للعلم(01/04/2018)
■ محمد خليل محمد زقوت(مدير)	← وئام ابراهيم اسماعيل فارس(رئيس قسم اداري)	للعلم(01/04/2018)

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▪ محمد خليل محمد زقوت(مدير)	← عطا عبدالغني خميس الجزار(حكيم جامعي)	للعلم(01/04/2018)
▪ محمد خليل محمد زقوت(مدير)	← طارق سليمان عيد ابو مصطفى(طبيب بشري أخصائي)	للعلم(01/04/2018)
▪ يوسف فوزي اسماعيل العقاد(مدير مستشفى)	← كمال صبحي عبدالحميد موسى(مدير اداري)	لعمل اللازم(01/04/2018)
▪ يوسف فوزي اسماعيل العقاد(مدير مستشفى)	← عطا اسماعيل خليل الجعبري(مدير دائرة التمريض)	لعمل اللازم(01/04/2018)
▪ عطا عبدالغني خميس الجزار(حكيم جامعي)	← خوله عبدالكريم خليل المدهون(حكيم جامعي)	لعمل اللازم(01/04/2018)
▪ عطا عبدالغني خميس الجزار(حكيم جامعي)	← غازي سليمان عبدالله عاشور(مدير)	لعمل اللازم(01/04/2018)
▪ عطا عبدالغني خميس الجزار(حكيم جامعي)	← وائل عبد المجيد عبد الرحيم عبد الهادى(مدير)	لعمل اللازم(01/04/2018)
▪ كمال صبحي عبدالحميد موسى(مدير اداري)	← يحيى عبد القادر رمضان النواجحه(رئيس شعبة اداري)	لعمل اللازم(01/04/2018)
▪ بلال ابراهيم محمد ابوعلوان(رئيس شعبة اداري)	← محمد عبد الفتاح سعيد صبح(مدير)	لعمل اللازم(02/04/2018)
▪ محمد عبد الفتاح سعيد صبح(مدير)	← علاء الدين ابراهيم محمد ابو مر(رئيس قسم اداري)	لعمل اللازم(03/04/2018)
▪ علاء الدين ابراهيم محمد ابو مر(رئيس قسم اداري)	← فتحي حمدان عوده بن حماد(فني عام أ.أ)	لعمل اللازم(03/04/2018)
▪ علاء الدين ابراهيم محمد ابو مر(رئيس قسم اداري)	← صباح عبد المجيد توفيق حماد(رئيس شعبة اداري)	لعمل اللازم(03/04/2018)

عنوان الدراسة: المعرفة والاتجاهات والممارسة بين الممرضين فيما يتعلق بعلاج الألم عند الأطفال في المستشفيات الحكومية في جنوب قطاع غزة

إعداد: عاطف سالم أبو عمرة

إشراف: د. حاتم الدباكة

ملخص الدراسة

الألم هو أكثر الأعراض المزعجة التي يعاني منها الأطفال، ومع ذلك تعالج بشكل خاطئ على الرغم من وجود العديد من البحوث والتقدم العلمي في علاج الألم على مر السنين. عدم كفاية المعرفة والإتجاهات السلبية تبقى حاجزاً رئيسياً أمام تحقيق علاج فعال للألم. إن الغرض من هذه الدراسة هو تحديد المعرفة والإتجاهات والممارسة بين الممرضين تجاه علاج الألم عند الأطفال في المستشفيات الحكومية في جنوب قطاع غزة. ولقد تكونت عينة هذه الدراسة من 87 من الممرضين والممرضات العاملين/ت في أقسام الأطفال في المستشفيات الحكومية في جنوب قطاع غزة، ولقد تم اختيار الممرضين بطريقة العينة المتاحة واستخدام برنامج الرزم الإحصائية للعلوم الإجتماعية لتحليل العينة

ولقد أشارت نتائج الدراسة الى أنه لدى الممرضين مستوى متوسط من المعرفة فيما يتعلق بعلاج الألم عند الأطفال يصل الى 69.1 %، وأن اتخاذ توجه إيجابي تجاه علاج الألم عند الأطفال كان منخفضا بنسبة 38.3 %، وكذلك أظهرت النتائج أن مستوى الممارسة أيضا كان بنسبة متوسطة63.7 % من النقاط التي تعكس مستوى الممارسة لدى الممرضين في المستشفيات الحكومية بجنوب قطاع غزة، كما لا يوجد اختلافات ذات دلالة إحصائية لعلاقة مستوى المعرفة والإتجاهات والممارسة لدى الممرضين بالنسبة للجنس، العمر، المؤهل العلمي، المنصب في العمل، أقسام العمل، سنوات الخبرة والخبرة في أقسام الأطفال فيما يتعلق بعلاج الألم عند الأطفال.

واستناداً إلى النتائج، فإن الممرضين كانوا على مستوى متوسط من المعرفة والممارسات، وآخر ضعيف من الإتجاهات فيما يتعلق بعلاج الألم عند الأطفال. ولقد أوصت الدراسة بتفعيل برنامج تعليم مهني مستمر للممرضين والممرضات داخل المستشفيات الحكومية في جنوب قطاع غزه لتعليم كيفية علاج الألم عند الأطفال.