

Mothers versus Pediatric Nurses' Attitude Regarding Mothers' Presence during Invasive Nursing Procedures for Their Hospitalized Children

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Abstract: Mothers' presence with the hospitalized child fulfills most the child's basic needs. Sensitive and emotionally available mother during hospitalization increases her confidence and helps the child to be calmer and to form a secure attachment style which fosters a child's socio-emotional development and well-being. The aim of the present study has two folds; to assess the mothers and nurses' attitude toward mothers' presence during invasive nursing procedures; and to detect the differences between mothers and nurses attitude. A descriptive comparative research design was utilized to fit the aim of the study. A convenient sample of 100 pediatric nurses and 100 mothers of hospitalized children were participated in the study. The study was conducted in medical and surgical wards at Cairo University Specialized Pediatric Hospital. Data were collected by a structured interview schedule developed by the researchers; it involved questions pertinent to nurses' sociodemographic and professional data, data related to mothers and their children, as well as mothers and pediatric nurses' attitude questionnaire. The results revealed that, the highest percentage of both mothers and pediatric nurses reported positive attitude towards mothers' presence during invasive nursing procedures for their hospitalized children. Apparently, the mothers had less positive attitude than pediatric nurses. On the other hand, there was no statistically significant difference between the mothers and pediatric nursing attitude concerning the presence of mothers with their hospitalized children during invasive nursing procedures. The study recommended that, mothers should be offered the option to be present with their child during medical and nursing procedures and offered support before, during, and after the procedure.

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1. Introduction

Family-centered care (FCC) is a way of caring for children and their families within health services which ensures that care is planned around the whole family. FCC has evolved within inpatient facilities over the past quarter-century. It is now well-accepted that pediatric care should be provided within the context of families, with parents considered essential partners in their children's care (Curley *et al.*, 2012). FCC is a philosophy of health care in which a mutually beneficial partnership develops between families and the nurse, and also other health professionals (Ball, *et al.*, 2012). It includes an assessment of the health of an entire family, identification of actual or potential factors that might influence the health of its members and implementation of interventions needed to maintain or improve the health of the whole family (Jolly, 2009).

Hospitalization, whether it is elective, planned in advance, or the result of an emergency or trauma, is stressful for children of all ages and their families (Sharma, 2013). Hospitalized children experience a variety of emotions as they are in an unknown environment, surrounded by strangers, unfamiliar

equipment, separation from social network, disrupted life routine and frightening sights and sounds. These children are subjected to invasive or painful procedures. Child's illness and hospitalization invariably stirs up intense emotions for parents. Their concern and anxiety will often be mixed with feelings of insecurity, guilt, fear and grief (Ball, *et al.*, 2012). Walsh (2010) emphasized that, helping children and family to cope with all these stressors is the primary responsibility of the nurse. Provision of holistic care that does not only consider the physical aspect of the child but also the physiological, psychological, social, cultural, and developmental aspects should be the concern of nursing care.

Painful invasive procedures are horrifying - for many hospitalized children, worse than the disease itself. The seemingly endless barrage of needle sticks terrifies children and tears at the heart of parents, who are unable to protect their children from them. One can assume that, the prick of a needle will hurt anyone, it is quite clear that there are significant differences between children in how they respond to noxious stimuli (Mohamed, 2005). Hospitalized children undergo multiple, cyclic procedures such as

vein punctures throughout their treatment course, and many describe such procedures as the most distressing part of their hospitalization (Windich-Biermeier, *et al*, 2007). It is well documented in pediatric literature that intrusive healthcare experiences can have a profound negative impact on a child's psychological well-being for months to years after the experience (Breiner, 2009). A study conducted by Salmela, *et al* (2009) examined hospital-related fears in 90 children ages-4-6 years found that fears from pain, needle shots, and blood sample taking and were the most identified fears experienced by children.

Mothers' presence, defined as the attendance of child's mother during hospitalization and during various nursing procedures, has a place in the context of FCC. The underlying premise is that each child is an extension of a larger unit: his or her family. The presence of a family member usually maintains the relationship between the child and the family, neutralizing the effects of separation (Bedell & Cleary, 2009). The child benefits greatly from mother or caregiver presence and participation and experiences less emotional distress and anxiety. If the mother-child attachment remains uninterrupted, the child experiences less behavioral maladjustment as a result of hospitalization. Mothers often want to support their child before, during and immediately after invasive medical or nursing procedures, and their presence offers reassurance and comfort to the child. During invasive procedures, mothers can be educated to support the child by providing gentle touch, talking, singing, giving reassurance, or illustrating stress reduction techniques. The decision to allow mothers to be present during invasive procedures must be made on an individual basis (Ball, Bindler & Cowen, 2012).

The pediatric nurse is often the first person the child and his/her family sees when the child enters the hospital. The nurse therefore has a unique opportunity to influence that child's physical and emotional health (James, Nelson & Ashwill, 2013). Nurses must work with the family to develop the best plan of care for a child. Parents are experts in their child's care and know more about their child. The family is also the child's main source of support providing stability in what can be an otherwise traumatic period in a child's life. The presence of the family during health related invasive procedures can significantly reduce both the child's and parent's anxiety. Decreased anxiety from the child and family decreases the stress on healthcare workers, positively affecting their ability to provide care. In essence the nurse must attend to both the needs of the family and child in order to maximize a child's outcomes. Some studies are being conducted about the presence of a family in the room during invasive procedures, even emergency resuscitation. The results have yielded better child and family

outcomes. Children have addressed feeling of comfort of their parents' presence and parents are given the opportunity to witness procedures, reducing their questions and concerns. The most important task of the nurse is to provide support to the family. There are two key components of support, these are enabling and empowerment. Enabling refers to providing opportunities for the family to display their current skills while learning and acquiring new skills. Empowerment refers to the ability of the healthcare team to allow families to acquire a sense of control over their family's lives (Hockenberry & Wilson, 2010).

Significance of the Study

It is now well-accepted that pediatric care should be provided within the context of families, with parents who are considered essential partners in their children's care. Pediatric health care has shifted toward FCC that is based on close and continuous involvement of the child's family members. Hospitalized children are subjected to a variety of invasive procedures as part of their management, either for investigation, and/or for treatment. In hospitalized children, invasive procedures can cause major physiological and psychological disturbances.

Mothers' presence during invasive nursing procedures is a relatively underdeveloped and controversial practice. There has been growing interest in the feasibility of allowing mothers to be present with their hospitalized children during invasive procedures. To our knowledge, there are scarce studies that have addressed whether mothers want to be present when invasive procedures are performed for on their hospitalized children. Hopefully, the present study's results can assist pediatricians and pediatric nursing clinicians, hospital administrators, and policymakers in moving family-centered care into practice.

Aim of the Study:

The aim of the present study has two folds:

1. To assess the mothers and nurses' attitude toward mothers' presence during invasive nursing procedures.
2. To detect the differences between mothers and nurses attitude toward mothers' presence during invasive nursing procedures.

Research questions:

1. What are the mothers and pediatric nurses' attitudes regarding the presence of mothers during invasive nursing procedures for their hospitalized children?
2. What are the differences between mothers' attitude and pediatric nurses' attitude regarding the presence of mothers during invasive nursing procedures for their hospitalized children?

2. Subjects and Methods

Design:

A descriptive comparative research design was utilized to fit the aim of the study.

Setting:

The study was conducted at three medical and two surgical wards at Cairo University Specialized Pediatric Hospital (CUSPH).

Sample:

A convenient sample of 100 pediatric nurses who are working in the previously mentioned settings and 100 mothers who are accompanying their children in medical and surgical wards for at least 48 hours.

Ethical considerations:

All children's mothers and pediatric nurses were informed about the aim of study in order to obtain their acceptance to participate in the current study. The researchers explained to them benefits of the current study. The researchers informed mothers and nurses that all data gathered during the study were considered confidential. The researchers also informed them about their rights to withdraw from the study at any time without giving any reason.

Data Collection Tools:

1-Mothers' attitude structured interview schedule:

It was developed by the researcher after extensive reviewing of related literature to collect the needed information. It consisted of two parts:

Part I: Sociodemographic characteristics of mothers, such as age, level, of education, occupation, marital status, number of children and place of residence. It involved data about children as, child's age, gender, rank, diagnosis, and history of previous hospitalization.

Part II: Mothers' attitude: An 18 items Likert type-scale of three continuum was used to assess the mothers' attitude: it consisted of 3 items {agree (2), neutral (1) and disagree (0)}. The general attitude was calculated as follows. The mean of agreement answer for each item was considered as a positive attitude, while, disagree considered as a negative attitude, and neutral was considered as neutral attitude.

2- Pediatric nurses' attitude structured interview schedule: It was developed by the researcher after extensive reviewing of related literature to collect the needed information. It consisted of two parts:

Part I: Nurses' sociodemographic characteristics: such as age, qualification, job title, marital status, years of experiences and training courses related to family centered care and parent participation in the care of hospitalized children.

Part II: Pediatric nurses' attitude: A 16 items Likert type-scale of three continuum was used to assess the mothers' attitude: it consisted of 3 items {agree (2), neutral (1) and disagree (0)}. The general attitude was calculated as follows. The mean of agreement answer

for each item was considered as a positive attitude while, disagree considered as a negative attitude, and neutral was considered as neutral attitude.

Tools Validity and Reliability:

The content of the data collection tools was submitted to a panel of five experts in the field of pediatric nursing to test the content validity. Modifications of the tools were done according to the panel judgment on clarity of sentences, appropriateness of content and sequence of items. Reliability was applied by testing ten pediatric nurses and ten mothers, reliability coefficients' alpha between questions was 0.86.

Pilot Study:

A Pilot study was carried out on 10 mothers and 10 pediatric nurses, to test the clarity and feasibility of questions and to estimate the time required for the interview. The necessary modifications were done and the sample was excluded from the total sample.

Data Collection Procedure:

An official permission to carry out the study obtained from the official personnel in CUSPH and from the chairpersons of medical and surgical wards. Simple explanation was given to them about the nature of the study, its aims, benefits and study tools. Collecting the data for the pediatric nurses was conducted at the break time in the morning and afternoon shift to prevent work interruption. Each nurse was asked to fill the data collection tools individually to assure obtaining the unique awareness of every nurse. The time needed for each nurse ranged from 20-25 minutes. Collecting the data from the mothers was conducted, after medical round, meal distribution and medication time. Each mother was interviewed individually. The time needed for each mother to answer the structured interview schedule and attitude sheet ranged from 30-35 minutes. Data was collected at three medical and two surgical wards at CUSPH. Data was collected from August to November (2012).

Statistical Analysis:

A compatible personal computer (PC) was used to store and analyze data. The Statistical Package for Social Studies (SPSS), version 11.0 was used. Data were coded and summarized using mean and standard deviation for quantitative variables and percent for qualitative variables. Comparison was performed using Chi-square. Correlation among variables was done using Pearson correlation coefficient. The p -value <0.05 and p -value <0.001 was considered statistically significant.

3. Results

Regarding to mothers and children sociodemographic characteristics, it was evident from the results of the present study that, half (50%) of mothers their age ranged from 20- less than 30 years.

Equal percentages (33%) of mothers were illiterate and just read and write respectively. As regards mothers' occupation, it was found that, nearly two thirds (66%) of them were house wives. Fifty two percent of mothers came from Upper Egypt, while 48% of them were from Cairo and Lower Egypt governorates.

The results revealed that, the mean age of children was 5.6 ± 3.44 year. Regarding their gender, it was found that, 64% of children were males. Forty four percent of them ranked as the first child. More than half (56%) of them had pervious hospitalization, the mean of hospitalization times was 2.15 ± 4.21 . Figure (1) illustrated that, 22% of children were complained from respiratory problems, followed by 21% from orthopedic problems. On the same context, 18%, 15%, 10%, 6% respectively of them complained from renal, central nervous system (CNS), gastrointestinal (GIT), and cardiac disorders.

Concerning to pediatric nurses' sociodemographic characteristics, the results revealed that, 34% of them aged from 30-less than 40 years, 66% of them were graduated from secondary school of nursing. The mean of the nurses' years of experience in caring for pediatric patients was 11.31 ± 8.46 . More than half (56%) of them were staff bedside nurses. In addition, only 22% of nurses attended training courses about family-centered care and parent participation in the care of hospitalized children, 63.6% of the nurses who attended the training courses, received it in their hospitals.

In relation to mothers' attitude regarding their presence during invasive nursing procedures performed for their hospitalized children, table (1) revealed that, the majority (85%) of mothers preferred the presence next to their child during any of the nursing procedures. Mothers cannot see their child in pain during nursing procedures as replied by 73% of mothers. On the other hand, 61% and 66% respectively of mothers agreed that, their child cried more and feel restless while they present during the painful nursing procedures. More than half (52%) of mothers agreed that, the hospital administration makes preparation for children and mothers at the beginning of hospitalization. The same table evident that, 52% of mothers agreed that, all nurses does not prefer the presence of the mother during any of the nursing procedures; moreover, the highest percentage of mothers (69%) agreed that, some nurses do not prefer the presence of the mother during invasive nursing procedures in particular.

As regards pediatric nurses' 'attitude regarding the presence of mothers during invasive nursing procedures, it is clear from table (2) that, 79% of nurses who participated in the present study viewed that, the presence of the mother during nursing

procedures generally hinder their work as a nurse. Three quarters of nurses (75%) reported their agreement; there is no need for the presence of the mother during invasive nursing procedures because the child cries more. On the same context, 71% of nurses thought that, the child usually restless while the mother present during invasive nursing procedures. Furthermore, 82% of nurses agreed that some mothers cannot afford to see their child during invasive nursing procedures.

It is evident from the same table that, an equal percentage (87%) of nurses reported their agreement about; the presence of the mother during invasive nursing procedures depends on the age of the child and the type and nature of the procedure. The presence of the mother during invasive nursing procedures varies from one nurse to another and depends on the understanding of the mother of the child's status as viewed by 79% and 85% of nurses respectively. The majority (88%) of nurses agreed that the hospital administration should work to prepare for children and mothers at the beginning of the child's hospitalization. Unfortunately, 68% of nurses do not agreed that the mother and the child have rights to decide whether the mother to be present during all invasive nursing procedures.

Table (3) indicated that, more than three quarters (77%) of pediatric nurses had positive general attitude regarding the presence of mothers during invasive nursing procedures compared to 74% of mothers had positive attitude. The results demonstrated that, mothers reported less positive general attitude than pediatric nurses, but there was no statistically significant difference was detected between mothers and nurses' general attitude ($p < 0.05$).

It was found from the results of the present study that, there were statistically significant correlations between the mothers' general attitude regarding their presence during invasive nursing procedures performed on their children and their age, level of education, and age of their child ($p > 0.05$). The desire to be present was higher among young mothers with higher educational backgrounds and mothers with younger children. On the other hand, there were no statistically significant correlations between the mothers' general attitude and their child gender, mother occupation and place of residence ($p < 0.05$). In addition, there were statistically significant correlations between the pediatric nurses' general attitude and their age, educational qualification, and years of experience in caring for hospitalized children ($p > 0.05$). Pediatric nurses with more years of experience and with higher educational qualification had more positive attitude toward the presence of mothers during invasive nursing procedures performed for their children.

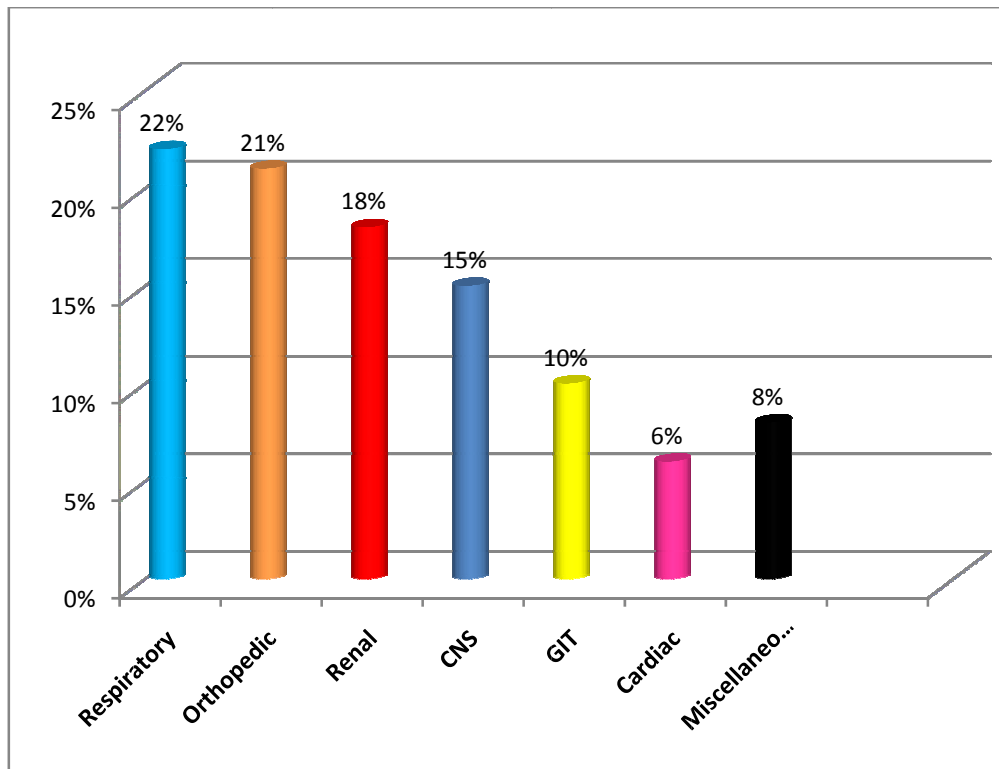


Figure (1): Percentage Distribution of Children' Diagnosis. (n=100)

Table (1): Percentage Distribution of Mothers' Attitude regarding the Presence of Mothers during Invasive Nursing Procedures (n=100)

| Items | Agree | | Disagree | | Neutral | |
|--|-------|----|----------|----|---------|---|
| | NO | % | NO | % | NO | % |
| I prefer presence next to my child in any of the nursing procedures | 85 | 85 | 14 | 14 | 1 | 1 |
| I prefer presence next to my child during invasive procedures only | 50 | 50 | 43 | 43 | 7 | 7 |
| I think that there is no need for my presence during the invasive painful procedures | 51 | 51 | 47 | 47 | 2 | 2 |
| I cannot see my child in pain during nursing procedures | 73 | 73 | 24 | 24 | 3 | 3 |
| My child cried more in my presence during the painful nursing procedures | 61 | 61 | 37 | 37 | 2 | 2 |
| My child usually restless during my stay | 66 | 66 | 34 | 34 | 0 | 0 |
| I am confident that the nurse doing what I'm doing to reassure my child | 55 | 55 | 42 | 42 | 3 | 3 |
| The nurse cannot be replaces the mother during painful procedures | 56 | 56 | 41 | 41 | 3 | 3 |
| The nurse can performed some painful procedures and the child in his mother's lap | 41 | 41 | 53 | 53 | 6 | 6 |
| The nurse works to relieve pain by playing during procedures instead of a mother | 40 | 40 | 53 | 53 | 7 | 7 |
| The nurse works to relieve pain by playing during the painful procedures only | 45 | 45 | 51 | 51 | 4 | 4 |
| The nurse prepares the mothers to support their children during all nursing procedures | 46 | 46 | 47 | 47 | 7 | 7 |
| The nurse should prepares the mothers to support their children during invasive nursing procedures only | 38 | 38 | 56 | 56 | 6 | 6 |
| The hospital administration makes preparation for children and mothers at the beginning of hospitalization | 52 | 52 | 45 | 45 | 3 | 3 |
| Some nurses does not prefer the presence of the mother during any of the nursing procedures | 57 | 57 | 40 | 40 | 3 | 3 |
| All nurses does not prefer the presence of the mother during any of the nursing procedures | 52 | 52 | 45 | 45 | 3 | 3 |
| Some nurses does not prefer the presence of the mother during invasive nursing procedures | 69 | 69 | 31 | 31 | 0 | 0 |
| All nurses does not prefer the presence of the mother during invasive nursing procedures only | 48 | 48 | 51 | 51 | 1 | 1 |

Table (2): Percentage Distribution of Pediatric Nurses' Attitude regarding the Presence of Mothers during Invasive Nursing Procedures (n=100)

| Items | Agree | | Disagree | | Neutral | |
|--|-------|----|----------|----|---------|---|
| | NO | % | NO | % | NO | % |
| The presence of the mother during nursing procedures generally hinder my work as a nurse | 79 | 79 | 14 | 14 | 7 | 7 |
| The presence of the mother during invasive nursing procedures hamper the nursing activities | 81 | 81 | 16 | 16 | 3 | 3 |
| I think that there is no need for the presence of the mother during invasive nursing procedures because the child cries more | 75 | 75 | 23 | 23 | 2 | 2 |
| The presence of mother facilitates my performance | 52 | 52 | 41 | 41 | 7 | 7 |
| The child usually restless while the mother present during invasive nursing procedures | 71 | 71 | 25 | 25 | 4 | 4 |
| Some mothers cannot afford to see the child during invasive nursing procedures | 82 | 82 | 17 | 17 | 1 | 1 |
| There must be a parent to restrict the movement of the child during invasive nursing procedures | 70 | 70 | 26 | 26 | 4 | 4 |
| Nursing procedures performed smoothly in the absence of the mother | 79 | 79 | 18 | 18 | 3 | 3 |
| Regulations do not allow the presence of the mother during hospital invasive procedures | 78 | 78 | 21 | 21 | 1 | 1 |
| There are some nursing procedures that should not be made in front of the mother: like blood samples, vein puncture | 83 | 83 | 16 | 16 | 1 | 1 |
| The presence of the mother during invasive nursing procedures depends on the age of the child | 87 | 87 | 13 | 13 | 0 | 0 |
| The presence of the mother during invasive nursing procedures depends on the type and nature of the procedure | 87 | 87 | 12 | 12 | 1 | 1 |
| The presence of the mother during invasive nursing procedures varies from one nurse to another | 79 | 79 | 20 | 20 | 1 | 1 |
| The presence of mother during invasive nursing procedures depends on the understanding of the mother of the child's status | 85 | 85 | 15 | 15 | 0 | 0 |
| The hospital administration should work to prepare for children and mothers at the beginning of the child's hospitalization | 88 | 88 | 11 | 11 | 1 | 1 |
| The mother and the child have rights to decide whether the mother to be present in all invasive nursing procedures | 32 | 32 | 68 | 68 | 0 | 0 |

Table (3): Mothers versus Pediatric Nurses' General Attitude Regarding the Presence of Mothers during Invasive Nursing Procedures

| General Attitude | Mothers (n=100) | | Pediatric Nurses (n=100) | | X ² | P |
|------------------|-----------------|----|--------------------------|----|----------------|--------|
| | NO | % | NO | % | | |
| Positive | 74 | 74 | 77 | 77 | 0.29 | < 0.05 |
| Negative | 18 | 18 | 15 | 15 | | |
| Neutral | 8 | 8 | 8 | 8 | | |

4. Discussion

Concerning the sociodemographic characteristics, it was evident from the present study's results that, half of mothers' age ranged from 20- less than 30 years. In a similar Egyptian study conducted by Abdalbaki, *et al* (2011) who investigated the maternal versus pediatric nurses' attitudes regarding mothers' participation in the care of their hospitalized children in one hospital in Alexandria, Egypt, they found that the mothers' age ranged between 22- 42 years with mean age of 29 ±5years. Apparently the present study indicated that, about one third of mothers were illiterate, the same percentage of them just read and write and the rest of them had secondary school and university education which indicates improvement of literacy rate of Egyptian female. On the same line, the Egypt

Demographics Profile (2012) assured that, the literacy rate among females was 63.5% compared to 59.4% in 2010. So efforts of governmental and non-governmental organizations should focus on female' education because low levels of literacy, and education in general, can impede the economic development of a country in the current rapidly changing, technology-driven world, this of course will reflect positively on the health care system as a whole. As regards mothers' occupation, it was found that, nearly two thirds of them were house wives. Fifty two percent of mothers came from Upper Egypt's governorates, while 48% of them were from Cairo and Lower Egypt's governorates. Perhaps this result emphasizes that the CUSPH receives children from all over Egypt, and it is the main destination for pediatric patients and their families. In addition the

place of residence urban, rural, or suburban could carry out some cultures and believes that affects mothers' attitude regarding their children's illnesses

It is clear from the study's results that the majority of the hospitalized children were in the preschool stage of growth and development. On the same context, a burgeoning literature has also demonstrated that, the greatest stressors to hospitalized preschoolers are the fear of being alone, fear of the dark, fear of abandonment, fear of loss of self-control, and fear of bodily injury or mutilation. Moreover, they feel guilty about being sick, or they may view the illness and hospitalization as punishment (Ball, *et al*, 2012). Therefore the presence of mothers with their children in the hospital could be beneficial to decrease child's fears and anxiety. Regarding to children's gender, it was found that, about two thirds of children were males and the rest were females. This could be attributed to that Egyptian families, and families in third world in recent years, are paying attention and seeking medical advice for both boys and girls offspring's. This is also may attributed to that; some types of illness that might be linked with male gender.

According to Egypt Demographic and Health Survey (2008) acute respiratory infection (ARI), particularly pneumonia, is a common cause of morbidity and of death among infants and young children. The results of the present study were in accordance to the above mentioned empirical evidences and demonstrated that about one fifth of children who admitted in the medicine wards were complained from respiratory problems. In a related context, Selwyn (2012) highlighted that, the investigation of the epidemiology of ARI among children 0–59 months old in ten different countries. Data on incidence rates, by age, gender, and season and on pathogenic agents were investigated. Incidence rates from community-based studies ranged from 12.7 to 16.8 new episodes of ARI per 100 children.

There is growing evidence that childhood surgical conditions are common in developing countries and that inadequate care results in significant numbers of deaths and cases of disability. Strategies for improving pediatric surgical care should be evidence-based and cost-effective and should aim to benefit the largest possible number of children. On the same line, the present study pointed out that, the highest percentage of them had orthopedic, renal, central nervous system, digestive and cardiac surgical problems. These results might be contributed to the environmental changes and their impact on congenital anomalies that are surgically treated in pediatric hospitals.

In relation to pediatric nurses' sociodemographic characteristics, the results of the present study clarified that, the highest percentage of them aged from 30-less than 40 years, and about two thirds of them were graduated from secondary school of nursing. The mean of the nurses' years of experience in caring for pediatric patients was 11.31 ± 8.46 . More than half of them were staff bedside nurses. Unfortunately, less than one quarter of nurses who participated in the present study attended training courses about family-centered care and parent participation in the care of hospitalized children. This result needs deep insights from both medical and nursing authorities. Similarly, an Egyptian study conducted by Abdalbaki, *et al* (2011) found that the pediatric nurses' ages ranged between 18-56 years with a mean age of 33 ± 9.68 , 79% of nurses were diploma nurse. The majority of them work as bedside nurse. Almost half of nurses had ≥ 10 years, in caring of pediatric patients. In the present study; the researchers' points of view that nurses' age, year of experience and education are attributed factors for their attitude regarding to family or mothers presence with their children during invasive procedures.

The practice of allowing family members to be present during invasive procedure of their relative is one that been discussed over the past few decades. With the rise of FCC, family input into healthcare decisions has increased and strict visitation policies have relaxed, even including family at the bedside during invasive procedures (Emergency Nurses Association, 2012). The results of the present study were in accordance to the above mentioned empirical evidences and demonstrated that the majority of mothers preferred the presence next to their child in any of the nursing procedures. On the same context, an increased number of research studies were conducted from the family's perspective. A majority of family members expressed a desire to be present, stating that it is their right to be present with their children and would recommend it to other families (Dudley *et al.*, 2009).

In contrary, almost three quarters of mothers in the present study, cannot see their child in pain during nursing procedures and their child cried more and restless while they present during the painful nursing procedures. The study results were contradicted with Mohamed (2011) who examined the effect of selected distracters on intensity of pain and fears of children during vein puncture, and found that near half of children preferred presence of their mothers in the hospital to reduce their pain. The author emphasized that, the presence of mothers is a vital component of managing children's pain, as they are familiar with the child's likes and dislikes,

hobbies, home environment and level of cognition, and usually have a well-established trusting relationship with their child. Moreover, Tinsley *et al.* (2008) also reported a majority of family members believed their presence during invasive procedures and resuscitation was comforting to their child.

Clearly, the present study's results indicated that, more than half of mothers reported that, all nurses do not prefer the presence of the mother in any of the nursing procedures and during invasive nursing procedures in particular. The study results were contradicted with the results of a research that focused on the opinions and perspective of health care professionals toward family presence during invasive procedures and indicated support for the practice of family presence (Fallis, *et al.*, 2009).

As regards pediatric nurses' 'attitude regarding the presence of mothers during invasive nursing procedures, it is evident from the present study that, the majority of nurse viewed that the presence of the mother during nursing procedures generally hinder their work as a nurse; and there is no need for the presence of the mother during invasive nursing procedures because the child cries more. Furthermore, the highest percentage of nurses agreed that some mothers cannot afford to see their child during invasive nursing procedures. Moreover, empirical evidence and previously cited research literatures conducted by Basol, *et al.* (2009); Fernandez, *et al.* (2009); McClement, *et al.* (2009) support these results and commented that, despite the majority of health care professionals having expressed support for the concept of mothers presence during procedures, there were several themes that emerged demonstrating reasons for reservation regarding the practice. These themes included the possibility of families interfering with the process and disrupting care, increased performance anxiety and stress on the part of nurses and other health care professionals, and the interference with the process of teaching.

Unfortunately, more than two thirds of nurses do not agreed that the mother and the child have rights to decide whether the mother to be present in all invasive nursing procedures. The previous results could be attributed to the nurse's reservation about mother's ability to support the child during all invasive procedures. In addition, many nurses want to deliver the best care to their pediatric patients without any interference of mothers especially those with limited level of education. On the other hand, Emergency Nursing Association (2012) reported that, family member presence during invasive procedures should be offered as an option to appropriate family members and should be based on written health institution policy. On the same context,

Ball, *et al.* (2012) added that parents should be permitted to be present during medical and nursing procedures performed for their children.

Several studies were done exploring the attitudes of nurses in Turkey by Gunes and Zaybek (2009) in Germany by Koberich, *et al.* (2010) and recently in Saudi Arabia by Al-Mutair, *et al.* (2012) with regards to family presence during invasive procedures and resuscitation. Studies reported negative attitudes of health care workers including nurses toward family presence, citing concerns around stress to staff and family members. The results of the present study were contradicted with the above mentioned empirical evidences and demonstrated that more than three quarters of pediatric nurses had positive general attitude regarding the presence of mothers during invasive nursing procedures. The results also indicated that mothers reported less positive general attitude than pediatric nurses, but there was no statistically significant difference was detected between mothers and nurses' general attitude. These results could be interpreted as mothers try to avoid see their children during invasive painful procedures and some mothers could belief that their presence may be traumatic for them and for their children. Evidences indicated that with increasing procedural invasiveness, mothers desire to be present decreased.

It was found from the results of the present study that, there were statistically significant correlation between the mothers' general attitude regarding their presence during invasive nursing procedures performed for their children and their age, level of education, and age of their child. The desire to be present was higher in younger mothers with higher educational backgrounds and mothers with younger children. Usually mothers' levels of education, and age, are increasing their capabilities in providing care for their sick children. Furthermore, the degree of children physical and psychological dependency on their mothers is higher among younger children than older ones which result in the necessity of mothers' presence during invasive procedures. Also, the researchers believed that there are natural emotional attributes that enhance the attachment relationship between mothers and their children particularly during illness and consequently invasive procedures.

Moreover, there were statistically significant correlation between the pediatric nurses' general attitude and their age, educational qualification, and years of experience in caring for hospitalized children. Pediatric nurses with higher years of experience and with higher educational qualification had more positive attitude toward the presence of mothers during invasive nursing procedures

performed for their children. These results could be related to that pediatric nurses are more accepting of the presence of mothers during invasive procedures, especially if they have had positive previous experience with mothers' presence. In addition, the more qualified and experienced nurse, the more confidence and ability to endure interference of others. In a similar study conducted by Ellison (2003) who found that educational preparation, type of certification, area of specialization and professional designation of nurses were significant predictors of positive attitudes toward family presence during invasive procedures.

Conclusion

The present study concluded that, the highest percentage of both mothers and pediatric nurses reported positive attitude towards mothers' presence with their hospitalized children during invasive nursing procedures. Apparently, the mothers had less positive attitude than pediatric nurses. The majority of mothers desired to be present during nursing procedures performed for their children. This desire decreased somewhat with increasing procedural invasiveness. There was no statistically significant difference was detected between mothers and nurses' general attitude. The study also concluded that, the desire to be present was higher in young mothers with higher educational backgrounds and mothers with younger children. On the other hand, there were no statistically significant relationships between the mothers' general attitude and their child gender, mother occupation and place of residence. In addition, pediatric nurses with higher years of experience and with higher educational qualification had more positive attitude toward the presence of mothers during invasive nursing procedures performed for their children.

Recommendations

Based on the findings of the present study the following recommendations are suggested:

- Pediatric nurses should improve the quality of service and nurse-child-family relationship by taking mothers' preferences into consideration.
- Mothers\caregivers should be offered the option to be present with their child during nursing procedures and offered support before, during, and after the procedure.
- Child' preferences regarding mother presence during invasive nursing procedures should be ascertained whenever possible and followed when known.
- Provide information to the mothers\caregivers on how best to be present during the invasive

nursing procedures. This may include observation, touching, and talking to child.

- Acknowledge the individual coping and emotional responses of the parent during invasive procedures while continuously assessing the parent's influence on the milieu.
- In service training programs should be provided for all categories of pediatric nurses regarding the benefits of mother's presence and participation in all aspects of child's care.
- Development of an evidence-based protocol would provide a framework for parent presence during invasive nursing procedures performed for their children.
- For further researches the study should be replicated to conduct on a larger sample including other pediatric hospitals is needed for generalization of the reached results.

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