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ORIGINAL RESEARCH

Comparison of Nurses' Knowledge and Attitude Regarding Pediatric Pain Management in Different Care Hospitals in Iraq.

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ABSTRACT

Background: Inadequate pain management for hospitalized children is a major issue, often due to gaps in healthcare providers' knowledge. Nurses play a key role in effective pain relief, and proper training and compassion are essential for children's well-being and recovery.
Objectives: To assess the nurses' knowledge and attitude regarding pediatric pain management in Dr. Jamal Ahmad Rashid's Pediatric Teaching Hospital and Hiwa Cancer Hospital.
Methodology: A quantitative descriptive study design was conducted at Dr. Jamal Ahmad Rashid's Pediatric Teaching Hospital and Hiwa Cancer Hospital in Sulaymaniyah City, Iraq. A non-probability (purposive) sampling technique was used, and 182 nurses working in pediatric care from both hospitals participated. All statistical computation is enhanced using statistical methods (SPSS 24).
Results: Of 182 nurses, 67.6% had positive attitudes, and 42.9% had a good understanding of pediatric pain management. There were significant differences between hospitals ($p = 0.000$), with nurses at Hiwa Hospital outperforming those at Dr. Jamal Hospital in both knowledge (86.5% vs. 25.4%) and attitudes (88.5% vs. 59.2%). The knowledge and attitude gaps, particularly at Dr. Jamal Pediatric Teaching Hospital, highlight the need for targeted training.
Conclusion: The study presents important details about the attitudes and knowledge of nurses in Sulaymaniyah City, Kurdistan Region, Iraq, regarding the care of pediatric pain. While the majority of nurses demonstrated fair to good knowledge and positive attitudes.

Keywords: Attitude, Knowledge, Nurses, Pediatric, Pain management.

INTRODUCTION

Pediatric is a branch of medicine that focuses on caring for infants and young children, ensuring their physical, mental, and social well-being as they grow. It involves promoting overall health, diagnosing and treating illnesses, and supporting their development and behavior to help them thrive (Rudolf et al.,2020). According to the WHO, every human being below the age of eighteen is a child, and unless under the law applicable to the child, the majority is attained earlier. People younger than 18 comprise 35% of the global population and 40% of the global population of least-developed nations.

Pain is an unpleasant emotional and sensory experience associated with real or potential tissue damage. (Lee et al.,2020) (Nicholas et al.,2019). Pain in children is a complicated experience influenced by factors like their social, emotional, physical, and developmental state. Caregivers often face difficulties because younger, pre-verbal children can't express their pain clearly. Instead, they show discomfort

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through nonverbal cues, such as crying or changes in their behavior. (Rivi et al.,2023). These complexities require nurses to utilize specialized assessment tools tailored to the child's developmental stage. Understanding pain as a multidimensional experience enables nurses to take a holistic approach that addresses physical, psychological, and social factors. Using tools like pain assessments, empathetic communication, and collaborative goal-setting, nurses can tailor interventions to each patient's needs. This interdisciplinary strategy supports individualized care plans that enhance both physical and emotional well-being (Cáceres-Matos et al.,2021)

Managing pain effectively is important for children's overall well-being, including their physical, emotional, and mental health. If pain isn't properly addressed, it can slow down recovery, lead to longer hospital stays, and negatively impact their quality of life. This high.lights the need for proper pain management strategies in pediatric care (Friedrichsdorf et al.,2016).

Uncontrolled pain in children can lead to adverse physiological effects, such as an increased heart rate, heightened cortisol secretion, and a compromised immune response. These consequences highlight the importance of effective pain management in pediatric care (Twycross et al.,2018). When pain is not properly managed, it can make it harder for patients to move, slow down the healing process, weaken their immune system, delay recovery, raise the chances of complications, lead to longer hospital stays, and increase healthcare costs. (Kahsay et al.,2019) (D'Emeh et al.,2016).

Nurses are key to caring for children, and their understanding, approach, and actions are vital for providing effective pain relief (Lunsford and L., 2015). Pain relief is recognized as a basic human right, and healthcare providers have both a moral and legal duty to ensure that all patients receive proper pain management, even those who cannot express their discomfort, like infants and critically ill children (Sullivan et al., 2023). Managing pain effectively in pediatric care is vital for a child's overall well-being—physically, emotionally, and psychologically. If pain is left untreated, it can slow down healing, lead to longer hospital stays, and negatively impact their quality of life (Sullivan et al.,2024).

AIMS OF THE STUDY

The study explores how well nurses understand and approach pediatric pain management in two hospitals in Iraq—Dr. Jamal Ahmad Rashid's Pediatric Teaching Hospital and Hiwa Cancer Hospital. By comparing their knowledge and attitudes, the research aims to uncover any gaps that may exist. The goal is to highlight the need for specialized training programs that can help nurses improve their skills and provide better pain management for children in their care.

METHODOLOGY

Design of the study:

The study used a quantitative descriptive design with purposive sampling. A structured questionnaire was employed, and data were analyzed using SPSS 24. It is conducted from November 22nd, 2024, until March 1st, 2025. The content validity of the questionnaire was assessed by a panel of 24 experts in the relevant field. These experts reviewed the items of the questionnaire for clarity, adequacy, and relevance to the study objectives. The majority of the experts agreed on the items included in the study, but provided a few comments and suggestions. Based on their feedback, some items were modified, some were excluded, and the questionnaire reached its final form after incorporating the experts' opinions. Cronbach's alpha was employed to assess the reliability of the participation questionnaire. The resulting Cronbach's alpha value is 0.826.

Study Setting and Sampling Plan:

Non-probability purposive sampling technique (we wanted to know the level of knowledge of the nurses caring for children, as Hiwa Cancer Hospital, is also cares for children and adults), was assessed

(182) nurses working in Dr. Jamal Ahmad Rashid's Pediatric Teaching Hospital and Hiwa Cancer Hospital caring for children. Also, to compare the chronic and acute health care settings for managing pain.

Study instrument:

A questionnaire was constructed through an extensive review of international literature and guidelines. The questionnaire consists of four sections:

Section I: Demographic characteristics of Nurses was composed of (14) items. **Section II:** Nurses' Knowledge Regarding Pediatric Pain Management was composed of (16) items. **Section III:** Nurses' Attitude Regarding Pediatric Pain Management was composed of (15) items. **Section IV:** Barriers to Pediatric Pain Management was composed of (10) items. The knowledge of nurses was evaluated using a questionnaire consisting of 16 questions focused on pediatric pain management. Each response was scored as either 'false' or 'true '. Practice scores were calculated based on their responses. The scoring range for the questionnaire was from 0 (minimum) to 16 (maximum). Correct responses were assigned a score of 1, while incorrect responses received a score of 0. The knowledge levels of the nurses were classified as follows: good knowledge (≥ 75%) with scores ranging from 12 to 16, fair knowledge (50% - < 75%) with scores from 8 to 11, and poor knowledge (< 50%) with scores from 0 to 7.

The attitude of nurses was evaluated using a 15-question survey focused on their perspectives regarding pediatric pain management. Participants responded with 'agree,' 'not sure,' or 'disagree,' and the sample size consisted of 182 individuals. Each participant's attitude score was calculated based on their responses. The total possible score on the questionnaire ranged from 0 (minimum) to 30 (maximum). A positive attitude was assigned a score of 2, a 'not sure' response received a score of 1, and a negative attitude was marked with 0. Nurses' attitudes were classified into three categories: a good attitude (≥ 75%) with a score range of 22-30, a fair attitude (50% - < 75%) with a score of 15-21, and a poor attitude (< 50%) with a score of 0-14.

Building on the insights gained from a previous research questionnaire, we developed a new instrument and sought feedback from 24 experts to evaluate its content. Subsequently, the questionnaire was submitted to the University of Sulaimani/ Department of English at the College of Languages for a scientific and accurate translation into English.

Ethical consideration:

This study received approval from the Scientific Committee of the Pediatric branch, College of Nursing/ University of Sulaimani, following approval of the Ethical Committee College of Nursing/ University of Sulaimani, an official letter has been sent from the College of Nursing/ University of Sulaimani to the General Directorate of Health (DOH) in Sulaymaniyah City to get an agreement for data collection of the current study. For that reason, an official letter has been submitted from the DOH to Dr. Jamal Ahmad Rashid Pediatric Hospital and Hiwa Cancer Hospital.

Statistical analysis

After the data was collected, (Statistical Package for the Sciences Service) SPSS 24 was used for data analysis. The statistical procedures that were applied to determine the result of the study include (Frequencies and Percentages, and the Statistical means of the score, chi-square), When the P-value is less than (0.05), the result is considered significant; when the P-value is more than (0.05), the result is considered non-significant.

RESULTS

Nurses' socio-demographic variables for the research population are shown in Table 1.

The majority of the participants were more than 35 years old, representing (42.9%), and only (35.7%) were between 25 and 35 years old. Most participants in the study (95.05%) were females, and only (4.95%) were males. The majority of participants were married

(69.78%), followed by (27.47%) who were single. A small proportion of the sample included widowed individuals (1.65%) and those who were separated (1.10%). Among the study participants, (45.604%) were from barely sufficient socioeconomic backgrounds, while the rate of sufficient was (36.264%), and (18.132%) were from insufficient socioeconomic backgrounds. Regarding education, the majority of the nurses graduated from institutes (59.34%), while (19.23%) graduated from universities.

Nurses' professional backgrounds are shown in Table 2, which made up the study sample. In terms of nursing experience, (36.81%) had 1–5 years, (10.44%) had 6–10 years, (20.33%) had 11–15 years, and 32.42% had 16 years or more. About half (48.90%) had worked with children for 1–5 years, (10.44%) for 6–10 years, (14.29%) for 11–15 years, and (26.37%) for 16 years or more. Most of the participants (77.47%) were ward nurses, followed by intensive care unit nurses (18.13%), while a lesser percentage were head nurses (2.75%) or in other wards (1.65%). In terms of working shifts, (45.05%) of the sample worked nights, and (54.95%) worked during the day. (28.57%) Of the nurses who worked at Hiwa Hospital, the majority (71.43%) were working at a Dr Jamal pediatric teaching hospital.

According to the distribution of nurses' knowledge on pediatric pain management, nurses' comprehension of many topics varied, with knowledge being classified as good, fair, or poor, as represented in Table 3. Most nurses showed strong expertise in several important areas. (98.90%) Of respondents correctly recognized intravenous (IV) injection as the preferred approach for addressing severe pain of quick onset, while the majority (99.45%) agreed that massage is an effective way to relieve pain. Furthermore, (96.70%) of respondents grasped the significance of giving postoperative analgesics on a set schedule, and 97.80% acknowledged that paracetamol was appropriate for managing pediatric pain. Additionally, (95.05%) of nurses correctly recognized that the patient is the best arbiter of their level of pain and that pain is not always absent just because the patient does not express it. Additionally, (93.96%) of respondents were aware that prolonged opioid usage in children might result in physiological dependence.

In children and adolescents receiving long-term opioid medication, for instance, (73.08%) of respondents said that respiratory depression is uncommon. The idea that children under the age of two have less pain sensitivity was also accurately rejected by (54.95%) of respondents, while (57.69%) acknowledged that a rising volume of analgesics does not usually indicate psychological dependence. Furthermore, (50.00%) of nurses knew that babies younger than six months old can handle opioids for pain management, and (48.35%) accurately recognized that 1-2 mg of morphine administered intravenously often results in analgesia lasting 4-5 hours. Only (59.89%) opposed the use of a placebo (sterile water injection) to evaluate the reality of pain, and (63.19%) disagreed with the notion that vital signs are always accurate measures of pain severity. Additionally, (45.05%) recognized that children less than two years old do not have less sensitivity to pain. Furthermore, (72.53%) of respondents agreed that children less than eight years old may accurately express the level of discomfort, as opposed to depending only on parental evaluation. The level of information of the participants about pediatric pain management (49.45%) had fair knowledge about pediatric pain management, while (42.86%) had good knowledge, and (7.69%) of participants had poor knowledge. There is a defect in the healthcare system, because the hospitals don't have follow-up and there is no special mandatory pain management protocol to apply it into practices, so the nurses always depend on pharmacological interventions.

The distribution of nurses' Attitudes about pediatric pain management is shown in Table 4, where their answers are categorized as good, fair, or poor. Most nurses showed a positive attitude toward important facets of managing pediatric pain. (91.75%)

Of respondents thought that talking to parents about pain is crucial to properly assessing their child's suffering, and almost (79.67%) felt that managing and relieving pain should be a top priority in children's therapy.

Similarly, (71.43%) of nurses felt that the instruments available for evaluating pain are useful for determining the degree of pain in children, and (80.22%) of nurses acknowledged the need to utilize pain assessment tools to establish adequate pain treatment. Additionally, (89.56%) of nurses thought that assessing and managing pain enhanced the child's quality of life, and the majority of them (81.32%) agreed that the impactful communication and education of the child's parents can significantly help reduce the duration of the hospital stay. In addition, (89.02%) of respondents felt that maintaining patient comfort through pain management is an essential nursing responsibility, and (78.02%) believed that managing pain lowers hospital stays and improves recovery.

Regarding several areas, some nurses showed fair attitudes. For instance, (60.44%) of respondents accepted the notion that pain ratings had to be recorded alongside other vital indicators, and (65.38%) believed that play therapy is a helpful strategy for easing toddlers' discomfort. As (67.03%) of respondents thought that analgesia should be used to treat persistent cancer pain, while (17.58%) disputed that children are better at handling pain than adults.

Areas of poor attitudes among nurses were also noted. Parents should not be present during difficult procedures, according to just (38.46%) of respondents, while (28.02%) thought that ongoing discomfort following procedures did not pose an issue. Furthermore, only (48.90%) of respondents believed that children's pain treatment may be impacted by the nurse's physical and emotional exhaustion. These findings point to knowledge gaps regarding the psychological and physiological effects of pain treatment. The attitude of the participants about pediatric pain management shows that (8.79%) of nurses have a poor attitude, (67.58%) of the participants have a good attitude about pediatric pain management, and (8.79%) of the respondents have a fair attitude.

Table 5 reveals that there is a statistically significant difference in nursing knowledge between the two hospitals (χ^2 = 58.433, p-value = 0.000). Among the respondents, (49.5%) had fair knowledge, with the majority (47.3%) from Jamal Hospital and only (2.2%) from Hiwa Hospital. Moreover, (42.9%) of participants established good knowledge, with (18.1%) from Jamal Hospital and (24.7%) from Hiwa Hospital. A poor knowledge level is reported among (7.7%) of respondents, with a higher rate in Dr Jamal Pediatric Teaching Hospital (6.0%) compared to Hiwa Hospital (1.6%).

In Table 6 a significant difference in attitude levels was also observed between the two hospitals (χ^2 = 19.266, p-value = 0.000). The majority of respondents (67.6%) confirmed a good attitude, with (42.3%) from Jamal Hospital and (25.3%) from Hiwa Hospital. Fair attitudes are noted in (23.6%) of respondents, mainly from Jamal Hospital (23.1%). Poor attitudes were reported by 8.8% of participants, with (6.0%) from Dr Jamal Pediatric Teaching Hospital and (2.7%) from Hiwa Hospital.

DISCUSSION:

The demographic profile of the nurses in the study showed that most were over 35 years old (42.9%), followed by those between 25 and 35 years old (35.7%). It is similar to the study that was done at the Lusaka Children's Hospital (Chaisupa and Eric,2020). A large majority (95.05%) of the nurses were female, which aligns with the gender distribution typically observed in the nursing profession. In terms of marital status, most were married (69.78%), while 27.47% were single. When looking at socioeconomic background, nearly half of the nurses (45.6%) reported having limited financial resources, while 36.3% felt financially secure. In terms of education,

the majority of nurses had a diploma (59.34%), with a smaller group holding a bachelor's degree (19.23%), which is less than other studies when the number of university graduates was (53.3%) (Sönmez et al.,2018). These findings suggest that while many nurses have formal training, there's a clear need for more opportunities for advanced education to improve nursing skills, especially in specialized areas like pediatric pain management.

The professional experience of the nurses in the study varied widely. About 36.81% had 1–5 years of experience, while 32.42% had over 16 years. Nearly half (48.90%) had 1–5 years of experience in pediatric care, and 26.37% had more than 16 years. Most nurses (77.47%) worked as ward nurses, with fewer in ICU (18.13%) or as head nurses (2.75%). Regarding work shifts, 54.95% worked during the day, and 45.05% worked night shifts. A large portion of the nurses (71.43%) worked at Dr Jamal Pediatric Teaching Hospital. These results emphasize the need for continuous education and training in pediatric pain management, especially for nurses with less experience in the field.

The study looked at how well nurses understand pediatric pain management, grouping their knowledge into good, fair, or poor categories. The results showed that (42.86%) of nurses had a fair level of knowledge, a greater number of nurses had a fair level of knowledge than other studies (Ndagijimana, 2017), while (49.45%) had good knowledge, and (7.69%) had limited knowledge. Many nurses correctly identified key pain management principles, such as the importance of using intravenous (IV) administration for sudden, severe pain (98.90%) and the need to give pain medication on a fixed schedule after surgery (96.70%). Additionally, most nurses (95.05%) recognized that patients are the best judges of their pain, (93.96%) understood the risks of long-term opioid use and physiological dependence, (63.19%) of nurses incorrectly believed that vital signs are always reliable indicators of pain intensity, both of the questions about the massage and absence of pain expression, long-term opioid use, and also about vital singe had the greater range than the other study (Lulie et al.,2022). On the other hand, (54.95%) of participants are almost the same as the other studies (Shrestha-Ranjit et al.,2023) about the children under two years old have less pain sensitivity and a limited memory of unpleasant experiences due to their immature neural systems. Despite these strengths, some misconceptions were evident. More than half (57.69%) mistakenly believed that needing higher doses of pain medication indicates psychological dependence, while (40.11%) thought placebos were a valid way to assess pain. Additionally, (45.05%) incorrectly assumed that children under two years old feel less pain. These misunderstandings highlight the need for focused education and training to ensure nurses are equipped with accurate, evidence-based knowledge for managing pediatric pain effectively.

The study also assessed nurses' attitudes and found that (67.6%) had a positive attitude, (23.6%) had a neutral attitude, and 8.8% had a poor attitude. Many nurses showed a strong belief in the importance of pain management, with (89.02%) agreeing that relieving pain is a key part of their role. Similarly, (91.75%) saw the value in involving parents in pain assessments, and (80.22%) recognized the importance of using pain assessment tools to guide treatment decisions. However, some concerns were raised. Almost half of the nurses (48.90%) didn't realize that their own physical and mental fatigue could affect how they manage pain. Additionally, (28.02%) felt that persistent pain after a procedure wasn't a significant issue, suggesting a gap in providing holistic care. Moreover,(39.01%) of nurses believed parents should be excluded from painful procedures, The study found several difficulties in managing pediatric pain effectively, like workplace overload (67.58%) and (64.84%) of nurses reported a lack of familiarity with pain assessment tools, and doctor's prescription to administer pain medication, were also identified as a major barrier by (79.67%) of

nurses it is remarkably similar to other studies (Aziznejadroshan et al.,2017), and the instability of children's health conditions (72.53%), which were the most frequently pointed out barriers. Additionally (62.09%) highlighted patients' inability to communicate as a serious difficulty that could negatively affect the child's emotional well-being.

When comparing the two hospitals, there were noticeable differences in both knowledge and attitudes. Nurses at Hiwa Hospital had much higher levels of knowledge, with (86.5%) classified as having good knowledge, while only (25.4%) of nurses at Dr Jamal Hospital showed the same. Similarly, nurses at Hiwa Hospital had more positive attitudes, with (88.5%) demonstrating good attitudes compared to (59.2%) at Dr Jamal Hospital. According to the results, nurses at Hiwa Cancer Hospital tend to have a higher level of knowledge and a more positive attitude toward pediatric management than those in other hospitals. This is largely because most of them are university graduates, giving them a strong foundation in both theory and hands-on practice. Additionally, they work closely with cancer patients, who require ongoing specialized care due to the chronic nature of the disease. Treating pediatric cancer patients is particularly challenging, as it involves managing severe pain, complex health conditions, and long-term treatment. As a result, the combination of their education and extensive experience allows these nurses to provide a higher standard of care with skill and compassion.

CONCLUSIONS:

The study highlights the strengths and challenges in how nurses understand and approach pediatric pain management. While many nurses have a strong theoretical background and a positive outlook, some misconceptions still exist, showing the need for more focused education. Differences between institutions also point to the importance of consistent, evidence-based training. Moving forward, efforts should focus on continuous learning, stronger policies, and hands-on training to close knowledge gaps and improve pain management for children.

RECOMMENDATIONS:

Enhance Pain Management Training

Although many nurses have received pain management education, its depth and scope need improvement. Training should emphasize standardized assessment tools and pediatric pain understanding, supported by regular, evidence-based updates on pharmacological and non-pharmacological methods.

Standardize Pain Assessment Tools

Inconsistent use of validated pain assessment tools remains a challenge. Institutions should mandate standardized tools like FLACC, NIPS, and Wong-Baker FACES across pediatric units to ensure accurate and consistent pain evaluation.

Support Parental Involvement

The study highlighted limited support for parental presence during procedures. Policies should promote family-centered care, recognizing the positive impact of parental involvement on child and caregiver anxiety.

Encourage Institutional Collaboration

Knowledge gaps between hospitals point to the need for shared learning. Inter-institutional workshops and training can standardize practices and promote best practices in pediatric pain management.

Address Legal and Ethical Barriers

Regulatory restrictions on nurse-administered analgesics hinder effective care. Legal frameworks should be revised to grant nurses appropriate authority while ensuring legal protections for all parties involved.

Future Research

Further research is needed to evaluate the impact of educational programs, institutional policies, and family involvement on pediatric pain outcomes. Including patient and family perspectives will enhance practice development.

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TABLES:

Table (1): Demographic Characteristics of Nurses

Variables		Frequency	%
Age (Years)	≤ 25	39	21.4
	25 – 35	65	35.7
	More than 35	78	42.9
Mean ±S. D		**34.76 ~ 35 ± 9.92**	
Gender	Male	9	4.95
	Female	173	95.05
Marital status	Single	50	27.47
	Married	127	69.78
	Widowed	3	1.65
	Separated	2	1.10
Economic status	Sufficient	66	36.264
	Barely	83	45.604
	Insufficient	33	18.132
Academic qualification	Preparatory nursing school	39	21.43
	Diploma	108	59.34
	Bachelor's	35	19.23
Total		**182**	**100**

Table (2): Professional Background of the Nurses

Variables		Frequency	%
Years of experience as a nurse	1-5 years	67	36.81
	6-10 years	19	10.44
	11-15 years	37	20.33
	16 years or above	59	32.42
Pediatric work experience	1-5 years	89	48.90
	6-10 years	19	10.44
	11-15 years	26	14.29
	16 years or above	48	26.37
Position /Duty	Ward nurse	141	77.47
	Head nurse (Head of unit)	5	2.75
	ICU nurse	33	18.13
	Others	3	1.65
Working shift	Day	100	54.95
	Night	82	45.05
Workplace	Pediatric teaching hospital	130	71.43
	Hiwa hospital	52	28.57
Total		**182**	**100**

Table (3): Distribution of the sample according to the nurses' knowledge regarding pediatric pain management.

Nurses' knowledge regarding pediatric pain management	False	True	Total Score	Results
	Fr. %	Fr. %		
Vital signs are always a reliable indicator of pain intensity (F)	67 36.81	115 63.19	67	Poor
The most accurate judge of the intensity of the patient's pain is the patient	9 4.95	173 95.05	173	Good
Lack of pain expression does not necessarily mean absence of pain	9 4.95	173 95.05	173	Good
When a patient requests an increasing amount of analgesic to control pain, this usually indicates that the patient is psychologically dependent(F)	105 57.69	77 42.31	105	Fair
Massage is a good method of alleviating pain	1 0.55	181 99.45	181	Good
Paracetamol is well-suited for the treatment of pain in children	4 2.20	178 97.80	178	Good
Respiratory depression rarely occurs in children/adolescents who have been receiving opioids for months	49 26.92	133 73.08	133	Fair
The recommended route of administration of opioid analgesics with brief, severe pain of sudden onset, e.g. (trauma, and postoperative pain) is (IV)	2 1.10	180 98.90	180	Good
Opioids should not be used in patients with a history of substance abuse (F)	53 29.12	129 70.88	53	Poor
Because their nervous system is underdeveloped, children under two years of age have decreased pain sensitivity and limited memory of painful experiences (F)	100 54.95	82 45.05	100	Fair
Giving patients sterile water by injection (placebo) is a useful test to determine if the pain is real (F)	73 40.11	109 59.89	73	Poor
Analgesics for postoperative pain should initially be given around the clock on a fixed schedule	6 3.30	176 96.70	176	Good
Young infants less than 6 months of age cannot tolerate opioids for pain relief (F)	91 50.00	91 50.00	91	Fair
Children less than 8 years old cannot reliably report pain intensity and therefore, the nurse should rely on the parent's assessment of the child's pain intensity(F)	50 27.47	132 72.53	50	Poor
Long-term continuing opioid medication almost always causes physiological dependence in child patients	11 6.04	171 93.96	171	Good
The usual duration of analgesia of 1-2 mg morphine IV is 4-5 hours(F)	94 51.65	88 48.35	94	Fair

Nott// Sample (182), Total score (182), The scale of knowledge of nurses was classified as good knowledge (≥ 75%) with a score (136-182), Fair knowledge: (50% - < 75%) with a score (91 – 135), and poor Knowledge (<50%) with score (0 – 90).

Table (4): Distribution of the sample according to the attitude of the nurses toward pediatric pain management

Attitude of the Nurses Toward Pediatric Pain Management	Disagree	Not sure	Agree	Total Score	Results
	Fr.	Fr.	Fr.		
	%	%	%		
Parents should not be present during painful procedures	71	41	70	181	Poor
	39.01	22.53	38.46		
Pain management and pain relief are of priority in children's treatment	11	26	145	316	Good
	6.04	14.29	79.67		
To better assess a child's pain, the nurse can discuss it with her/his parents	9	6	167	340	Good
	4.95	3.30	91.75		
Play therapy is a useful method for reducing pain in toddler	32	31	119	269	Fair
	17.58	17.02	65.38		
Using a pain assessment tool to determine a child's pain leads to an appropriate method of pain relief	14	22	146	314	Good
	7.69	12.09	80.22		
Children tolerate pain better than adults (disagree)	116	34	32	266	Fair
	63.74	18.68	17.58		
The nurse's physical and mental fatigue can affect children's pain relief	92	1	89	179	Poor
	50.55	0.55	48.90		
Like other vital signs, pain score should be documented	27	45	110	265	Fair
	14.84	24.72	60.44		
Available tools for the measurement of pain are the best for determining pain severity in children	18	34	130	294	Good
	9.89	18.68	71.43		
Analgesia for chronic cancer pain should be given	33	27	122	271	Fair
	18.13	14.84	67.03		
Measurement and control of pain in children leads to improved quality of child's life	7	12	163	338	Good
	3.85	6.59	89.56		
Communicating with and educating the child's parents play an effective role in relieving pain	10	24	148	320	Good
	5.49	13.19	81.32		
When the necessary procedures have been done for the patient, the persistence of pain does not cause problems	88	43	51	145	Poor
	48.35	23.63	28.02		
Measurement and control of the child's pain can affect the healing process and reduce the hospital stay	14	26	142	310	Good
	7.69	14.29	78.02		
To ensure patient comfort, pain relief is one of the most important tasks of nurses	10	10	162	334	Good
	5.49	5.49	89.02		

Nott// Sample (182), Total score (364), The scale of the attitude of nurses was classified as good attitude (≥ 75%) with a score (273-364), Fair attitude: (50% - < 75%) with a score (182-272), and poor attitude (<50%) with score (0 – 181).

Table (5): Comparison of Knowledge Regarding Pain Management between Dr. Jamal Pediatric Teaching Hospital and Hiwa Cancer Hospital

Knowledge		Hospital		Total
		Dr. Jamal Ahmad Rashid Pediatric Teaching H.	Hiwa Cancer Hospital	
Poor	Count	11	3	14
	% of column	8.5%	5.8%	7.7%
Fair	Count	86	4	90
	% of column	66.2%	7.7%	49.5%
Good	Count	33	45	78
	% of column	25.4%	86.5%	42.9%
Total	Count	130	52	182
	% of column	100.0%	100.0%	100.0%
Chi-square test		58.433	p-value	0.000

Table (6): Comparison of Attitude Regarding Pain Management between Dr. Jamal Pediatric Teaching Hospital and Hiwa Cancer Hospital

Attitude		Hospital		Total
		Dr. Jamal Ahmad Rashid Pediatric Teaching H.	Hiwa Cancer H.	
Poor	Count	11	5	16
	% of column	8.5%	9.6%	8.8%
Fair	Count	42	1	43
	% of column	32.3%	1.9%	23.6%
Good	Count	77	46	123
	% of column	59.2%	88.5%	67.6%
Total	Count	130	52	182
	% of column	100.0%	100.0%	100.0%
Chi-square test		19.266	p-value	0.000