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NURSES' KNOWLEDGE AND ATTITUDE TOWARDS PEDIATRICS' PAIN MANAGEMENT AT SIR GANGA RAM TEACHING HOSPITAL LAHORE

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ABSTRACT

Effective pediatric pain management remains a critical challenge in healthcare, impacting patient outcomes and quality of life. This cross-sectional study conducted at Sir Ganga Ram Teaching Hospital, Lahore, aimed to assess the knowledge and attitudes of 52 nurses regarding pediatric pain management. Findings revealed that 69.4% of nurses' demonstrated good knowledge, with notable disparities observed between those working in pediatric wards versus outpatient departments. Attitudes were generally favorable, with 68.2% of nurses prioritizing pain management, particularly those with more than 5 years of experience. However, significant gaps in knowledge and the need for ongoing education highlight opportunities for improving pediatric pain management practices among healthcare providers in similar settings. Future research should incorporate qualitative approaches to better understand the nuances of pediatric pain management attitudes among nurses.

KEYWORDS: Nurses' Knowledge, Pediatrics Pain Management, Anti-Inflammatory Drugs.

INTRODUCTION

A major challenge in acute healthcare is providing appropriate pain management for patients experiencing acute or chronic pain. As the population ages and longevity increases, quality of life issues become more prominent (Zainab & Muhammad Abu, 2018). Access to pain management is considered a fundamental human right, and international organizations emphasize the necessity of regular pain assessment as the fifth vital sign, crucial for patient health and wellbeing (Morone & Weiner, 2013).

Pain management is a critical aspect of nursing care, yet inadequate pain management is common due to a lack of understanding among health workers. The knowledge and attitude of nurses are essential for effective pain management in children (Nuseir et al., 2016). Despite international efforts to establish protocols and standards for pain management, under-treatment remains prevalent, largely due to insufficient knowledge among healthcare providers (Katende & Mugabi, 2015).

Although nurses cannot prescribe pain medications, they play a significant role in early assessment, continuous monitoring, and management of pain. However, several studies have highlighted deficits in pain knowledge and negative attitudes among pediatric nurses, posing significant barriers to effective pain management for children. Pediatric pain management requires precise knowledge and careful medication dosing due to physiological differences between adults and children (Raffaeli et al., 2016).

Studies from various countries have reported poor knowledge and attitudes among pediatric nurses regarding pain management. For instance, pediatric nurses in Turkey scored an average of 38.2% on pain management knowledge, while in India, the correct response rate was 48.67%, underscoring the need for international collaboration and the development of pediatric pain management guidelines (Latina et al., 2015).

Despite the importance of this issue, it remains

unclear if Jordanian pediatric nurses are adequately trained and equipped with the necessary knowledge and attitudes for managing pediatric pain. While some studies in Jordan have explored nurses' knowledge and attitudes regarding pain management, none have specifically focused on pediatric nurses, highlighting a gap in information about pediatric pain management in the region (Ekim & Ocakcı, 2013).

Literature Review

Pain control is a critical aspect of nursing care and subsequent management must be optimal to ensure patient satisfaction and quality patient outcomes. A study aimed to determine pediatric nurses' knowledge and attitudes towards pain management in Jordan using the Pediatric Nurses Knowledge and Attitude Survey (PNKAS) across four hospitals in Amman. Participants' average age was 30.48 years, with 94% being female. Nursing experience ranged from five months to 26 years, with most having a bachelor's degree. The majority (78.3%) had not attended continuous education related to pain management. The average PNKAS score was 45.3% (Nimbalkar et al., 2014).

Anderson & Holford (2013) conducted a qualitative study with 17 nurses, revealing gaps in knowledge about pain assessment scales, analgesic use, and effective morphine administration. Despite positive attitudes towards pain management, some nurses showed negative attitudes towards morphine use in neonates and acutely ill children. The study recommended comprehensive education, development of user-friendly pain scales, and supportive supervision (Anderson & Holford, 2013).

In Ethiopia, a cross-sectional study by Lulie et al. (2022) among 393 nurses found that 67.94% had good knowledge and 66.7% had favorable attitudes towards pediatric pain management. Training and work experience were significantly associated with better knowledge and attitudes.

Lunsford, (2015) found that educational level and experience influenced nursing staff's knowledge and beliefs about pain management in elderly patients. Trainee pain nurse specialists had higher knowledge levels due to their exposure to palliative care (Lunsford, 2015).

These studies highlight the need for ongoing education, better pain assessment tools, and practical support to improve pain management knowledge and attitudes among nurses.

Material and Methods

Study design (quantitative study): A descriptive cross-sectional study design was utilized to achieve the aim of this study.

Duration of study: It will be after approval of IRP BS-4 months (Bachelor student).

Study Population: Staff nurses of Pediatric medical emergency and pediatric medical ward Sir Ganga Ram Hospital Lahore.

Sample size: Total population of Nurses working in these wards is 60

N=Total population=60 n=Sample size e=level of significance

n= N/1+N (e) 2

n=60/1+60(0.05) 2

n= 60/1+60(0.0025)

(Slovin, s Formula)

n= 60/1.15

n=52.

By using 95% confidence level and 5% precision level, out of the 60 population, a sample size of 52 nurses will be taken from Sir Ganga Ram Hospital Lahore.

Sampling techniques: non-probability convenient sampling. It is probably the most common of all Sampling techniques. With convenience sampling, the samples are selected because they are accessible to the researcher. Subjects are chosen simply because they are easy to recruit. This technique is considered easiest, cheapest and least time-consuming.

Inclusion Criteria: Those who will be working in emergency unit from last 2 years.

Exclusion Criteria: Those who will be above 50 years of age.

Study Equipment: Paper, pen and constructed questionnaire. Questionnaire consists of two parts:

Part 1: Consists of demographical data of respondents.
Part 2: Consists of questions related to Assess Nurses knowledge and Attitude towards Pediatrics' Pain Management of Medical Emergency Department of Sir Ganga Ram Hospital Lahore.

Data Collection Process: Data were collected using a structured and pretested self-administered questionnaire among nurses at Sir Ganga Ram Teaching Hospital, Lahore. The questionnaire, adopted from the Pediatric Nurses' Knowledge and Attitude Survey regarding pain, included sociodemographic characteristics, knowledge-related questions, and attitude-related questions. A total of 52 nurses were randomly selected, informed about the study's objective, and provided consent to participate.

Ethical Consideration: Ethical approval was obtained from the hospital's ethical committee. Participants
Were informed about the study's aim and expected outcomes. Informed consent was collected, prioritizing the dignity and privacy of participants. Confidentiality of research data was maintained.

Data Analysis: Data were analyzed using SPSS version 23. Descriptive statistics were used to describe participants and presented with tables, graphs, and charts. Knowledge and attitude levels were assessed with 10 questions each, and mean scores were used as cutoff points to classify responses. Bivariable and multivariable binary logistic regression models identified predictors of good knowledge and favorable attitudes towards pediatric pain management, with p-values $\leqslant 0.05$ considered statistically significant.

Results

Table 1. Socio-demographic Characteristics of Participants (n=52)

Variable	Frequency	Percentage
Age of Respondents		
22-30	15	28.8%
31-40	31	59.6%
>40	6	11.5%
Marital Status of Respondents		
Single	15	28.8%
Married	35	67.3%
Widow	1	1.9%
Divorced	1	1.9%
Education of Respondents		
Diploma	36	69.2%
BSc Generic	3	5.8%
BSc N Post RN	13	25.0%
Experience		
<5 years	15	28.8%
5-10 years	26	50.0%
10-20 years	11	21.2%

The current study was carried out at Sir Ganga Ram Teaching Hospital, Lahore, involving 52 nurses. The above table 1 depicts that 28.8% (15) were aged 22-30 years, 59.6% (31) were aged 31-40 years, and 11.5% (6) were above 40 years old. Regarding marital status, 28.8% (15) were single, 67.3% (35) were married, 1.9% (1) were widowed, and 1.9% (1) were divorced. In terms of education, 69.2% (36) held a diploma, 5.8% (3) had a BSc in Nursing, and 25.0% (13) had a post-RN qualification. Experience-wise, 28.8% (15) had less than 5 years of experience,

50% (26) had 5-10 years, and 21.2% (11) had 10-20 years. The study assessed nurses' knowledge and attitudes towards pediatric pain management, with minimum and maximum scores of 1 and 3, respectively, and a mean score of 1.42 (SD = 0.38). Notably, 98.1% (51) responded that paracetamol is well-suited for treating pain in children, 82.7% (43) agreed that long-term use of anti-inflammatory drugs irritates children's digestive systems, and 26.9% (14) believed children do not need analgesics before burn dressing changes.

Table 2. Nurses knowledge related pediatrics pain management (n=52)

Questions	Yes, n (%)	No, n (%)	Don't know, n (%)
Paracetamol is well suited for the treatment over of pain in children.	51(98.1%)	1(1.9%)	0(0%)
Anti-inflammatory drugs irritate children's digestive systems in long term use.	43(82.7%)	3(5.8%)	6(11.5%)
Massage is good method of alleviating pain associated with tumors in children.	27(51.9%)	14(26.9%)	11(21.2%)
Long-term continuing opioid medications almost always causes physiological dependence in child pattern.	47(90.4%)	0(0%)	5(9.6%)
Respiratory depression rarely occurs in child / adolescent who have been receiving opioids over a period of months.	48(92.3%)	2(3.8%)	2(3.8%)
Children do not need analgesic drugs before having a burns dressing changed.	14(26.9%)	31(59.6%)	7(13.3%)
Vital sign always reliable indicates of intensity of pain.	46(88.5%)	6(11.5%)	0(0%)
Young infants, less than 6 months of age cannot tolerate opioid for pain relief.	34(65.4%)	13(25.0%)	5(9.6%)
Lack of pain expression does not necessary absence of pain.	29(55.8%)	16(30.8%)	7(13.5%)
Narcotic on regular schedule is preferred over" PRN" schedule for continuous pain.	18(34.6%)	23(44.2%)	11(21.2%)

Table 2 depicts the findings regarding nurses' knowledge and attitudes toward pediatric pain management. Among the 52 nurses, 98.1% (51) reported that paracetamol is well-suited for treating pain in children, while only 1.9% (1) disagreed. Additionally, 82.7% (43) agreed that the long-term use of anti-inflammatory drugs irritates children's digestive systems. Regarding massage as a method to alleviate pain associated with tumors, 51.9% (27) believed it is effective, 26.9% (14) disagreed, and 21.2% (11) were unsure. Furthermore, 90.4% (47) agreed that long-term opioid use causes physiological dependence in children, whereas 9.6% (5) were unsure.

Moreover, 92.3% (48) agreed that respiratory depression rarely occurs in children who have been receiving opioids over months, with 3.8% (2) disagreeing and 3.8% (2) unsure. When considering analgesic drugs for burn dressing changes, 26.9% (14) felt they were unnecessary, while 59.6% (31) disagreed, and 13.3% (7) were unsure. The reliability of vital signs as indicators of pain intensity was agreed upon by 88.5% (46) of nurses, with 11.5% (6) disagreeing.

Regarding the use of opioids for pain relief in young infants, 65.4% (34) believed infants under six months could not tolerate opioids, 25.0% (13) disagreed, and 9.6% (5) were unsure. Additionally, 55.8% (29) reported that a lack of pain expression does not necessarily indicate the absence of pain, with 30.8% (16) disagreeing and 13.5% (7) unsure. Regular narcotic scheduling for continuous pain was preferred by 34.6% (18), while 3.8% (2) disagreed, and 21.2% (11) were unsure.

A majority of nurses (94.2%, 49) agreed that pain management and relief are priorities in children. Play therapy and pain-assessment tools were deemed essential by 90.4% (47) and 86.5% (45) of

participants, respectively. Lastly, 55.8% (29) disagreed with the statement that children tolerate pain better than adults, although 15.4% (8) agreed. Overall, 66.7% of respondents had a favorable attitude towards pain management, with a mean score of 1.2 (±0.47 SD) and scores ranging from 1 to 3.

Table 3. Nurses Attitude related pediatrics pain management (n=52)

Questions	Agree F (%)	Not sure F (%)	Disagree F (%)
Parents should not present during painful procedures.	40(76.9%)	2(3.8%)	10(19.2%)
Pain management and pain relief are of priority in children treatment.	49(94.2%)	2(3.8%)	1(1.9%)
To better assess child pain, the nurse can discuss with her/his parents.	49(94.2%)	2(3.8%)	1(1.9%)
Assessment and control of child pain lead to improve his/her parents' satisfaction.	48(92.3%)	3(5.8%)	1(1.9%)
Like others vital sign, pain score should be documented.	50(96.2%)	1(1.9%)	1(1.9%)
Play therapy is a useful method for reducing pain in toddlers.	47(90.4%)	4(7.7%)	1(1.9%)
Using pain-assessment tools for determining child's pain lead to an appropriate method of pain relief.	45(86.5%)	5(9.6%)	2(3.8%)
Measurement and control of the child's pain can affect the healing process and reduces the hospital stay.	47(90.4%)	4(7.7%)	1(1.9%)
Analgesics for post-operative pain should initially be given.	44(84.6%)	5(9.6%)	3(5.8%)
Children tolerate pain better than adults.	8(15.4%)	15(28.8%)	29(55.8%)

Table 3 illustrates nurses' attitudes toward pediatric pain management. A significant majority of nurses (76.9%, 40) agreed that parents should not be present during painful procedures, while 19.2% (10) disagreed, and 3.8% (2) were unsure. The vast majority (94.2%, 49) agreed that pain management and relief are priorities in children's treatment, with only 1.9% (1) disagreeing and 3.8% (2) unsure. Similarly, 94.2% (49) agreed that discussing a child's pain with their parents aids in better assessment, with 1.9% (1) disagreeing and 3.8% (2) unsure. Additionally, 92.3% (48) of nurses believed that assessing and controlling a child's pain leads to improved parental satisfaction, with 1.9% (1) disagreeing and 5.8% (3) unsure.

The majority of nurses (96.2%, 50) agreed that pain scores should be documented like other vital signs, with 1.9% (1) disagreeing and 1.9% (1) unsure. Play therapy was seen as a useful method for reducing pain in toddlers by 90.4% (47) of nurses, while 1.9% (1) disagreed and 7.7% (4) were unsure. Most nurses (86.5%, 45) agreed that using pain- assessment tools helps determine the appropriate method of pain relief, with 3.8% (2) disagreeing and 9.6% (5) unsure. Additionally, 90.4% (47) of nurses believed that measuring and controlling a child's pain positively affects the healing process and reduces hospital stays, with 1.9% (1) disagreeing and 7.7% (4) unsure. Regarding post-operative pain, 84.6% (44) of nurses agreed that analgesics should initially be given, 5.8% (3) disagreed, and 9.6% (5) were unsure. However, 55.8% (29) disagreed with the statement that children tolerate pain better than adults, while 15.4% (8) agreed, and 28.8% (15) were unsure.

Discussion

The study conducted at Sir Ganga Ram Teaching Hospital, Lahore, involved 52 nurses to assess their knowledge and attitudes toward pediatric pain management. It was a descriptive, cross-sectional study including participants aged 22 to over 40 years. Pain is a major source of

distress for children, their families, and healthcare providers. In this study, 69.4% of nurses demonstrated good knowledge about pain management, consistent with a study in Northwest Ethiopia (67.94%) (Nuseir et al., 2016). This similarity may be attributed to comparable study designs, settings, and populations. However, the findings were lower than those in Australia (77.56%), likely due to the Australian study focusing on nurses in pediatric surgical wards, providing them with more recent exposure to pediatric pain management (Kholowa et al., 2017).

In contrast, the study's results were higher than those from Mekelle city (58.6%), potentially due to differences in study settings, educational levels of nurses, and data collection tools. Nurses working in the outpatient department (OPD) were 52% less likely to have good knowledge compared to those in pediatric wards, possibly due to greater theoretical and practical exposure in pediatric wards. Unlike a study in Mekelle city, this study found no significant association between nurses' knowledge and their age, gender, years of pediatric nursing experience, or educational level (Zainab & Muhammad Abu, 2018).

Regarding attitudes, 68.2% of participants in this study had a favorable attitude toward pediatric pain management, similar to the findings from Northwest Ethiopia (66.7%) and Bangladesh (66.79%) (Nuseir et al., 2016). The study's results were higher than those from Western Ethiopia (66.7%) and Zimbabwe (56%). This variation might stem from differences in study settings and assessment tools. For instance, the study in Western Ethiopia involved a multicenter setting, while this study was conducted in a tertiary-level hospital with BSc degree nurses. In Zimbabwe, the participants were from a medical ward, whereas this study included various clinical settings.

Additionally, nurses with 5–10 years and more than 10 years of experience were twice as likely to have a favorable attitude compared to those with less than 5 years of experience, contrasting with a study in Turkey where nurses with 1–5 years of experience scored higher. This difference may be due to the higher educational qualifications of less experienced nurses in Turkey. The findings indicate that many nurses lacked optimal pain management skills, with a mean score of 8.75 out of 10, and a correct answer rate of 49.67% among NICU staff and 48.67% among pediatric staff, higher than those from Shri Krishna Hospital, India (Nimbalkar, 2014). However, the study has limitations, including the cross-sectional design, which does not establish causality, potential survey respondents' bias, and the exclusion of qualitative factors affecting knowledge and attitudes toward pediatric pain management.

Conclusion

According to this study most of study participants had moderate knowledge and a favorable attitude toward pediatric pain management. Having good knowledge about pediatric pain management, increased working experience, and getting in-service training had a significant positive association with the attitude toward pain management. But some participants didn't have enough awareness about the pain management in pediatrics causing multiple complications among children during treatment.

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