



A Descriptive Study To Assess The Pain During Peripheral Intravenous Cannulation Among School Age Children At A Selected Private Hospital , Coimbatore.

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Abstract:

A descriptive study was conducted to assess the level of pain among school age children. Totally 30 school age children were selected as a sample size by using non probability convenience sampling technique. Wong – Baker Faces Pain Rating Scale (1988) was used to assess the level of pain among school age children. **Results:** Majority 53.34% of the samples had moderate level of pain, 30% of the samples had severe pain and 16.66% of the samples had worst level of pain during peripheral I.V cannulation. **Recommendation:** The hospitalization usually has a negative impact on the motor, cognitive, emotional and social development of the child. Most negative experiences of hospitalization are due to poor attention to the developmental needs of children .Paediatric Nurses should give special training on measures of reducing pain among children during hospitalization.

Key words: School age children, Pain, Peripheral I.V Cannulation, Hospitalization

Objectives

1. To assess the level of pain during peripheral IV cannulation among hospitalized school age children.
2. To find out the association between the level of pain during peripheral IVcannulation among hospitalized school age children and their selected demographic variables.

INTRODUCTION

Pain perception in children is complex and children frequently undergo medical procedure that are applied using a needle, such as venepuncture and intra venous cannulation that are considered as one of the important sources of pain for children causes considerable stress and anxiety for children and their parents. venipuncture is one of the most widely used diagnostic and therapeutic procedure in pediatric patient. Needle insertion procedures are most significant source of pain and distress in children in hospital settings. The intensity of pain and anxiety produced by these procedures can vary from mild to moderate for some, while for others, it may be severe. It is currently known that even such minor procedure, can result in several psychological, physiological and emotional problems.. Among these, needle phobia is the most significant and predominant one with more than 60% of children reporting a dangerous fear of needles following a bad needle experience.

BACKGROUND OF THE STUDY

Procedural pain causes a notable impact on general health and has a significant issue for paediatric patients. In specific, needle insertion pain is amongst the most stressful for children. Studies have shown that a large number of children do not obtain adequate pain preventive measures during the procedures. Ignoring the prevention of needle pain can cause several physiological, emotional, and psychological consequences effects such as anxiety and phobias, and rise perceptions of pain in the future so, there is a very urgent need to focus on the importance of care and relief for procedural pain and anxiety, however, the opportunity of care is often missed.

When providing care for juvenile patients, all health providers should be able to assess and manage pain in health care setting.(Cohen et al., 2009; Sadeghi et al., 2013, and Mutlu & Balci, 2015). In order to do this, the American Pain Society (APS) and the American Academy of Pediatrics (AAP) (2011) advise reducing and managing stress and pain during simple procedures such as creating vascular access. Thus, throughout nursing and medical treatments, both pharmacologic and non-pharmacologic pain management techniques are employed. (Dejen Tsegayeet.al,2023)

Assumptions.

- Hospitalized children undergoing Peripheral IV cannulation have some level of pain
- Pediatric nurses have a vital role in reducing the pain during peripheral IV cannulation.
- The level of pain among children undergoing peripheral IV cannulation will be influenced by selected demographic variables.

Hypothesis

H₁: There is a significant association between the level of pain during Peripheral IV cannulation among hospitalized school age children and their selected demographic variables.

Delimitation

The study is delimited to.

1. The children who are undergoing peripheral IV cannulation. .
2. Children who are admitted in pediatric wards between the age group of 7-12years
3. Data collection period is 5 weeks.

Projected Out Come

- The present study helps to identify the level of pain during peripheral IV cannulation among school age children.
- It will highlight those areas in children development which require genuine care and support.
- Identification of reaction will motivate to understand hospitalized children experience pain as unique and whole and therefore provide them improved quality care.
- It will promote sensitive care in order to meet effectively the needs of ill and hospitalized children and thus promote more positive health outcome.

Materials and methods:

Descriptive research design was adopted and by using nonprobability convenience sampling technique .30 school age children undergoing peripheral I.V cannulation were selected as a sample size. The inclusion criteria includes children who were between the age group of 7-12 years, admitted in paediatric wards, willing to participate, present at the time of data collection, who underwent peripheral IV cannulation. The exclusion criteria includes school age children who were having skin infections, scars, psoriasis and eczema at the site of peripheral IV cannulation, mentally challenged, had butterfly IV cannulation, who were unconscious and haemodynamically unstable, had a known chronic condition and developmentally delayed for their age. Structured interview technique was used to collect the demographic data of the samples and Wong – Baker Faces Pain Rating Scale(1988) was used to assess the level of pain among the samples. Total score was ranged from 0 – 10. The tool was validated by four Experts from the field of Child Health Nursing, one expert from Paediatric medicine.

Ethical consideration

The present study was approved by ethical committee members, after that Prior written permission was obtained from the Managing Trustee of Masonic Medical Centre for Children. Verbal consent was obtained from the samples and their Parents to conduct the study and assurance was given for the confidentiality of the data given by the samples.

Results

Table 1. Frequency and percentage distribution of samples according to their demographic variables,

n=30

S.No	Demographic Variables	(f)	%
1.	Age in years		
	1.1) 7-8	19	63.34
	1.2) 9-10	7	23.33
	1.3) 11-12	4	13.33
2.	Sex		
	2.1) Male	19	63.34
	2.2) Female	11	36.66
3.	Birth order		
	3.1) First child	21	70
	3.2) Second child	9	30
	3.3) Third child	0	0
4.	Place of residence		
	4.1) Rural	10	33.34
	4.2) Urban	20	66.66
5.	Educational status of the child		
	5.1) 2 nd and 3 rd std	20	66.66
	5.2) 4 th and 5 th std	9	30
	5.3) 6 th and 7 th std	1	3.34

6.	Types of family 6.1)Joint family 6.2)Nuclear family 6.3) Extended family.	21 9 0	70 30 0
7.	Family monthly income 7.1) $\leq 10,000$ 7.2) 10,001-20,000 7.3) $\geq 20,000$	 9 16 5	 30 53.34 16.66
8.	Previous history of peripheral IV cannulation for the past 3 months. 8.1) no history 8.2)1 time 8.3) 2-5 times 8.4) more than 5 times.	 22 5 3 0	 73.34 16.66 10 0
9.	Body Mass Index 9.1) $< 5\%$ 9.2) 5% - 85% 9.3) 85% - 95% 9.4) $> 95\%$	6 23 0 1	20 76.66 0 3.34

Table .2. Frequency and percentage distribution on level of pain during peripheral Intravenous cannulation among school age children

n= 30

Level of pain	F	%
No pain	0	0
Mild	0	0
Moderate	16	53.34%
Severe	9	30%
Worst pain	5	16.66%
Total	30	100%

The above table reveals that Majority 53.34% of the samples had moderate level of pain, 30% of the samples had severe pain and 16.66% of the samples had worst level of pain during peripheral I.V cannulation.

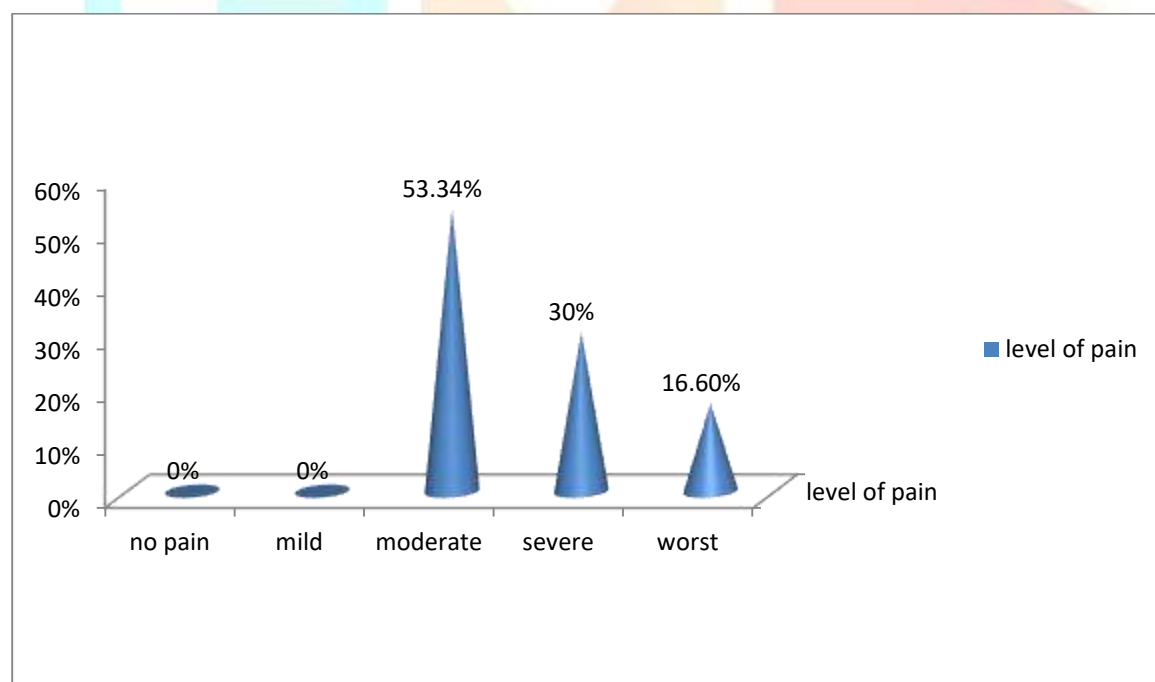


Table .3 Mean, Standard deviation, Mean percentage among samples.

Samples	Mean	Standard deviation	Mean percentage
	7.13	1.67	71.3%

Table 3. Elicits that the overall Mean score on level of pain among samples reveals that 7.13 ± 1.67 . The mean percentage of pain was 71.3%.

Table 4. Association between the level of pain during peripheral IV cannulation among children and their selected demographic variables.

n = 30

S.No	Demographic Variables	df	χ^2
1	Age	4	4.34
2	Gender	2	0.98
3	Birth order	2	0.37
4	Place of residence	2	0.73
5	Educational status of the child	2	9.58
6	Type of family	2	0.50
7	Family monthly income	4	0.53
8	Previous history of peripheral IV cannulation	4	5.70
9	Body mass index	4	6.58

*Significant at $p \leq 0.05$ level

The above table 4 reveals that, there was no significant association found between the level of pain among samples and their selected demographic variables such as Age, Gender, Birth order, Place of residence, Educational status of the child, Types of family, Family monthly income, previous history of peripheral IV cannulation, and body mass index. Hence H_1 was rejected.

Recommendations

1. A similar study can be conducted with large number of samples to generalize the findings.
2. A similar study can be conducted in various settings to identify the level of pain during other painful procedure.
3. Similar study can be conducted among other populations such as preschool and adolescents.

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