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## Anxiety Perceived By Children during Venipuncture

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### **Abstract:**

**Introduction:** *When it comes to paediatric patients undergoing venipuncture, it should be every phlebotomist's nurse's top goal to reduce a child's fear, pain, and distress. Most children have some fear of needles. When a child's level of distress in anticipation of the venipuncture is on the rise, it can be a rather difficult task for the nurse and parent to make the blood collection process go over smoothly!*

**Methods:** *This study was conducted using a descriptive correlational design among 181 children who met the inclusion criteria using purposive sampling technique. Data collection was done using Demographic, Clinical Variables Proforma and Modified Venham's Anxiety Scale.*

**Results:** *The findings revealed that 42.5% of the children had moderate anxiety, 7.7% had worst anxiety and 1.10% had no anxiety during venipuncture. The study findings revealed significant association between the anxiety and age of the child at the level of ( $P < 0.05$ )*

**Keywords:** *Anxiety, Venipuncture.*

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### **INTRODUCTION**

One of the most common painful procedures in Pediatrics, including in Emergency, is venipuncture. The WHO and several Pediatric Societies advocate improving the approach to pain and anxiety in children in a medical environment.(1)Interventions aimed at improving the health and well-being of children may also cause pain and anxiety. In-adequate pain control during medical procedures can have long term detrimental effects, especially among very young children. In the last fifty years, many studies have been carried out on the prevention and treatment of anxiety and pain in medical procedures in children. In pediatric emergencies, punctures for blood analysis are the primary cause of pain. (2-4)

Venipuncture is one of the most feared, distressing and painful invasive procedures in Pediatrics <sup>(5)</sup>. Owing to a natural fear of needles, almost all children feel anxiety before and during venipuncture, and also a pain <sup>(6)</sup>. Traumatic experiences connected with venipuncture can produce extreme anxiety. Treatment and prevention of pain and anxiety in children are important for their immediate well-being and future development <sup>(7,8)</sup>, including harmful effects on the immune and neurological system, behaviour and mental health <sup>(9)</sup>. Painful experiences in early childhood, their frequency and recall can maintain the negative effects <sup>(10-12)</sup>

Pharmacotherapy has been shown to be effective in reducing some of the pain and anxiety associated with medical procedures but it may come with worrisome side effects (13). Anxiety and fear are found to be inversely proportional to the age of children. Children cry, are scared and refuse to collaborate, whereas parents are often worried and unable to provide any support. Negative reactions, including phobia linked to previous procedures, may exacerbate the situation and reduce the likelihood to successfully carry out venepuncture (14).

Studies suggest that even painful experiences during neonatal age can be associated with excessive responses to pain during childhood and adulthood. Many sources report that pain relief is both an ethical imperative and a child's right requiring an accurate planning focused on the needs and characteristics of children and their families. This requires a multidisciplinary approach that is simple, safe, effective and inexpensive capable of reducing suffering and improving the outcomes of clinical procedures in children<sup>(15, 16)</sup>. It is reported that anxiety in children can increase their subjective perception of pain, but it can be reduced if their attention is focused on a pleasant activity. Literature refers to many coping strategies that can be facilitated by means of relaxation and distraction activities. It is also well known that if parents are properly informed, educated and trained they can improve their children's ability to cope with the procedure<sup>(17)</sup>.

A cross-sectional study was carried out using the Wong and numeric pain scales and the Observational Scale of Behavioral Distress (OSBD) for the assessment of behavioral distress. A group of children with chronic diseases and a group of children with no previous health problems nor experience of venipuncture, aged 4 to 12 years, both boys and girls, were observed during a standardized venipuncture procedure. Two hundred and thirty children among them 82 of them suffered from chronic diseases and had already experienced venipuncture at least once, while the remaining 148 children had no previous experience of venipuncture. The findings revealed that the children with chronic diseases reported more pain (median pain score of 8 on the Wong or numeric scales,) and showed more signs of behavioral distress (median score of 27 on the OSBD) than non-chronic children (median pain score of 2 on the Wong/numeric scales,  $p = 0.00001$ ; median OSBD score 5,  $p = 0.00001$ )<sup>(18)</sup>

While there is no question that children dislike needles, there are very little data available on the occurrence of high levels of anxiety experienced by children undergoing routine venipunctures. To provide some insight into this problem the researcher evaluated distress /anxiety among children undergoing venipuncture.

### **Statement of the Problem**

A Descriptive correlational Study to Assess the Anxiety Perceived by Children Undergoing Venipuncture at Selected Hospitals, Chennai.

### **Objectives of the Study**

1. To determine the anxiety perceived by children during venipuncture.
2. To determine the association between selected variables and anxiety perceived by children during venipuncture.

### **Null Hypothesis**

**H01** There will be no significant association between selected variables and anxiety perceived by children.

### **Materials & Methods**

A descriptive correlational design was adopted to conduct the study in Apollo Children's Hospital, Chennai, India after obtaining proper permission from the concerned authorities. One hundred and eighty one children were selected by purposive sampling technique. After the initial introduction, the researcher obtained consent from the subjects to participate in the study. An assurance was given regarding confidentiality before the data collection procedure.

### **Instruments**

The baseline data was collected using Demographic variable Proforma, Clinical variable Proforma and Modified Venham's anxiety scale for children. This tool was prepared by the researcher to measure the anxiety level of children undergoing venipuncture. This rating scale has 8 subsets, 4 for attributes of anxiety and 4 for attributes of behaviour. The scores ranged from 0- No anxiety, 1-10- Mild anxiety, 11 -20- Moderate anxiety, 21-30-Severe anxiety, 31-40- Worst anxiety. They were given scores from 0 -5 for each subset with a maximum score of 40 and minimum score 0.

The researcher observed and documented the anxiety expressed by children during venipuncture.

### **Data Collection**

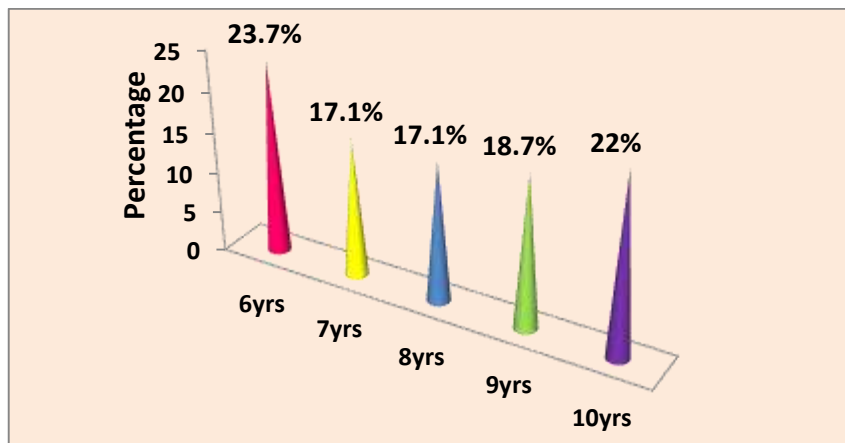
The researcher collected the demographic variables and the clinical variables by interviewing the children and their parents. The children aged 6 -10 years who were undergoing venipuncture at Apollo Children's Hospital, Chennai, India and satisfied the inclusion criteria were selected. After explaining the study verbal consent was obtained from parents and children. Anxiety perceived by children was assessed using Modified Venham's Anxiety Scale.

Results

**Table: 1 Frequency and Percentage Distribution of Characteristics in Control and Experimental Group of Children (N=181)**

Demographic Variable	n	P
<b>Gender</b>		
Male	98	54.1
Female	83	45.8
<b>Previous Experience of Venipuncture</b>		
Yes	106	58.5
No	75	41.4
<b>Number of Times</b>		
No	73	40.3
1-2	24	13.2
3-4	42	23.2
>4	42	23.2
<b>Presence of Caregiver During Procedure</b>		
Yes	37	20.4
No	144	79.5

The above table reveals that 54.1% of the children were boys and 45.8% were girls, 58.5% of them had previous experience of venipuncture, 40.3% of them had their venipuncture within the first attempt, 79.5% of them didn't have the caregiver's along with them during venipuncture.



**Fig 1: Percentage Distribution of Age of Children Undergoing Venipuncture**

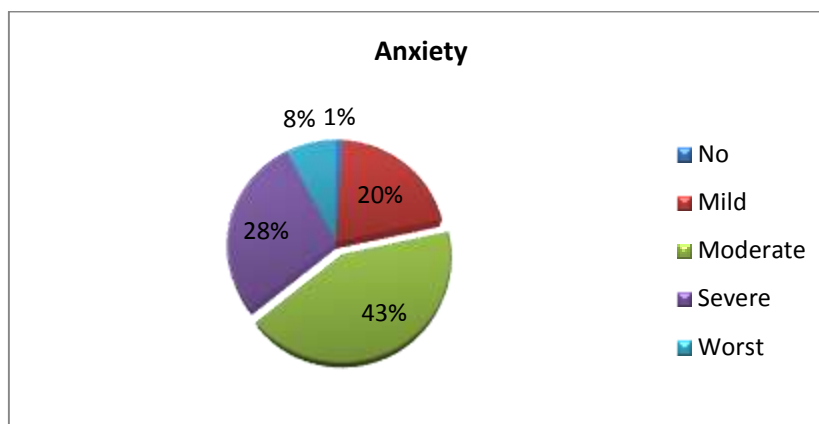


Fig 2: Percentage Distribution of Anxiety Perceived by children Undergoing Venipuncture

Fig 2 reveals that 42.5% of them had moderate anxiety, 7.7% had worst anxiety and 1.10% had no anxiety during venipuncture. Chi square test was used to find out the association between selected demographic variables and anxiety among children undergoing venipuncture it showed a significant association between the anxiety and age of the child at the level of ( $P < 0.05$ ).

### DISCUSSION

The study findings revealed that 54.1% of the children were boys and 45.8% were girls, 58.5% of them had previous experience of venipuncture, 40.3% of them had their venipuncture within first attempt itself, 79.5% of them didn't have caregiver along with them during venipuncture. Frequency and percentage distribution of anxiety perceived by children undergoing venipuncture reveal that 42.5% of them had moderate anxiety, 7.7% had worst anxiety and 1.10% had no anxiety during venipuncture. Several researchers have reported that younger children typically report greater levels of pain intensity and unpleasantness from needles, and manifest more distressing behaviours than older children.<sup>(19)</sup>

Chi square test was used for finding out the association between the selected demographic variables and anxiety among children undergoing venipuncture it showed a significant association between the anxiety and age of the child at the level of ( $P < 0.05$ ). The findings are similar to the findings of Humphrey et al<sup>(20)</sup> who evaluated distress in 223 different children and adolescents undergoing venipuncture. They observed a strong relation between distress and age but not between distress and gender. During the actual venipuncture toddlers and pre-adolescents showed high levels of distress.

### CONCLUSION

Venipuncture pain in children results from a variety of co-factors which increase the intensity of the nociceptive stimulus. For children in the hospital, venipuncture is one of the most fearful and painful aspects, which make them, feel the most anxious. Therefore, in daily clinical practice, it is necessary to increasingly promote the adoption of the effective and validated techniques known as systemic desensitization

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