**Background:** The simple insertion of a needle has been shown to be one of the most frightening and distressing medical procedures for hospitalized children. Buzzy device (cold and vibration) is one of the non-pharmacologic methods used and acts through local skin desensitisation according to gate-control theory which reduces the pain associated with Intravenous cannulation. Hence, the investigator was interested to do this study to put instant Pain Management in the hands while performing IV cannulation. The main aim of the study was to determine the effectiveness of Buzzy Technique on pain level during IV cannulation among children.

**Materials and methods:** Quantitative Research approach and a Quasi Experimental Non Equivalent Control Group Post Test only design was adopted. A total of 60 samples in the age group between 6-12 years (30 in experimental and 30 in control group), were selected based on inclusion criteria. Children belonging to the experimental group were applied the Buzzy, during IV Cannulation, while Children in the control group received the routine care. The Pain level was assessed by Wong’s Baker Pain scale. Descriptive and inferential statistics were used to analyze the data.

**Results:** The post test mean score for experimental group was 2.6 with a standard deviation of 1.9 and post test mean score for control group was 7.6 with a standard deviation of 2.13. The obtained Mann Whitney test value was 6.103 which was found to be statistically significant at p<0.001 level, which attributes to the effectiveness of Buzzy device in reducing pain.

**Conclusion:** Non-pharmacological methods used for alleviating pain during painful procedure is part of our Nursing care. As Buzzy is found to be highly effective in reducing pain among children, it can be used as an instant pain reliever for Children during IV Cannulation.