



EVIDENCES ON EFFECTIVENESS OF NON-PHARMACOLOGICAL MANAGEMENT OF PROCEDURAL PAIN AMONG CHILDREN.

Pooja*	Nursing Tutor, Amity College of Nursing, Amity University, Manesar, Haryana, India *Corresponding Author
Mukesh Chandra Sharma	Associate Professor, College of Nursing, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India
Supreet Rupam	Assistant Professor, Amity College of Nursing, Amity University, Manesar, Haryana, India

ABSTRACT

Background -Evidence as “the integration of best research evidence with clinical expertise and patient values”. Evidence Based practice in nursing is a process of locating, appraising, and applying the best evidence from the nursing and medical literature to improve the quality of clinical nursing practice. Research findings, knowledge from basic science, clinical knowledge, and expert opinion are all considered "evidence"; however, practices based on research findings are more likely to result in the desired patient outcomes across various settings and geographic locations. **Method (Searching strategies)** -Online articles and databases like PubMed ,CINHAL ,Medline ,Cochrane , Google Scholar **Area of search** -Evidences on Effectiveness of Non –pharmacological management of procedural pain among children .Various non –pharmacological Methods of pain management like non-nutritive sucking ,music ,swaddling ,positioning ,olfactory ,multi-sensorial stimulation ,maternal touch ,acupuncture, skin-to-skin contact”, “sucrose”, “massage “and “breastfeeding during nursing procedures like venepuncture ,immunization and other therapeutic procedure on children . **Evidence hierarchy:** levels of evidence on this area will be Systematic Review, Single RCT ,Single Non-Randomized Trial (quasi –experimental) ,Single prospective /cohort study ,Single case –control study ,Single cross –sectional study ,Single in-depth Qualitative study , Expert opinion, case reports, etc. **Result** –There are various research studies that shows that pain among children of various age group during procedure can be reduced or managed effectively by use of non-pharmacological methods only. **Conclusion** –After getting various level of evidence on non –pharmacological management of procedural pain among children nurses in various setting of children care like NICU, PICU and paediatric ward can use the evidences and technique in providing effective care.

KEYWORDS : “Non –pharmacological”, “children”, “procedural pain”, “effectiveness”

INTRODUCTION

Children are exposed to a high number of painful procedures in various paediatric care settings and effective management of pain associated with procedure is a serious challenge faced by nurses so to provide various level of evidences here Area of search was Effectiveness of Non –pharmacological management of procedural pain among children. Research findings, knowledge from basic science, clinical knowledge, and expert opinion are all considered "evidence"; however, practices based on research findings are more likely to result in the desired patient outcomes across various settings and geographic locations. Evidence as “the integration of best research evidence with clinical expertise and patient values”¹

databases like PubMed, CINHAL, Medline, Cochrane and Google Scholar .

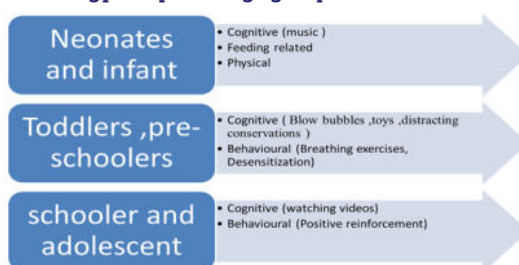
Area of search

Non –pharmacological Methods of pain management among children mainly during nursing procedures like venepuncture, immunization, and other therapeutic procedures

Classification of various Non –pharmacological strategies of pain management



Main Strategy for specific age group



- Level 1st**
- o Systematic Review
 - o Single RCT
- Level 2nd**
- o Single Non-Randomized Trial (Quasi –experimental)
 - o Single in-depth Qualitative study
 - o Expert opinion, case reports, etc

Method (Searching strategies) -Online articles and

Level of evidence	Evidences
Swaddling	1 st Cignacco E. ¹ , Hamers J.P.H. ² , Stoffel L. ³ , van Lingen R.A. ⁴ , Gessler P. ⁵ , McDougall J. ⁶ , done the systemic review to test efficacy of non-pharmacological interventions in the management of procedural pain in preterm and term neonates which includes 13 RCTs and 2 meta-analyses that shows "non-nutritive sucking", "swaddling" and "facilitated tucking" do have a pain-alleviating effect on neonates. ²
"non-nutritive sucking"	1 st
Facilitated tucking	1 st

Level of evidence	Evidences
KMC	2 nd HaixiaGao ¹ GuihuaXu ² HonglianGao ³ RongzhiDong ⁴ Hongjie Fu ⁵ DanwenWang ⁶ done the RCT to assess effect of repeated Kangaroo Mother Care on repeated procedural pain in preterm infants that was among 75 preterm infants .Results between-group comparison revealed that preterm infants' heart rate was significantly lower, and the duration of crying and facial grimacing were both significantly shorter in the Kangaroo Mother Care group (n=38) than the incubator group (n=37) during repeated heel sticks. ³
Breastfeeding	2 nd

Level of	Evidences
Music therapy	1 st Mangat k.Avneet ¹ ,oeljuu-lee ² ,chen .karry ³ ,smith Im quah ⁴ ,schmolzer M.george ⁵ done a systemic Review of Non-Pharmacological Treatments for Pain Management in New-born Infants they included 24 studies assessing different methods of non-pharmacological analgesic technique which shows that most of method resulted in some degree of analgesia but many were ineffective Sucrose, for example, was often ineffective but was more effective than music therapy, massage, breast milk. But Most of non-pharmacological methods provide a modicum of relief for infants, but none are completely effective and there is no clearly superior method. ⁴
Massage	1 st

Level of	Evidences
	2 nd Eman M.MatarPhD, ¹ RN Diana H.ArabiatPhD, MSc, PG Cert, RN ² Mandie J.FosterPhD, PG Dip, PG Cert, RN ³ done a quasi-experimental study to test efficacy of 10% oral glucose solution on procedural pain among 90 neonates ,when the neonate was given 2 ml of 10% glucose solution two minutes before the procedure or where oral glucose was withheld .The results showed the mean NPAS (Neonatal pain assessment scale) scores in response to procedure were significantly lower in the intervention group than the control group ⁵

Level of	Evidences
2 nd	ParvinAziznejadroshan ¹ ,Fatemeh Alhani ² ,EesaMohammadi. ³ done a qualitative study to assess experiences of Iranian Nurses on the Facilitators of Pain Management in Children in results 4 themes were extracted Through data analysis: Mother and child participation in diagnosis and pain relief, Timely presence of medical staff and parents and non-pharmacological method of pain relief like proper communication, training and supportive role of nurses enhanced the optimal pain management in hospitalized children. ⁶

Level of evidences	Evidences
Bubble blowing	Experts opinion Panel of experts for the Clinical Practice Guideline for Pain Management in Children with Cancer gives the opinion that Non-pharmacological interventions must be considered for managing pain among children even if their effectiveness remains unproven, fact these methods do not cause adverse effects, because they provide comfort and well-being to the child. ⁷
<ul style="list-style-type: none"> ➤ Breathing exercises ➤ Desensitization ➤ Positive reinforcement ➤ Initiating distracting conversations 	

Key word:

- Non-pharmacological- referring to the therapy that do not involve medications
- Children – human beings from birth to 18 years of age.
- Procedural pain- unpleasant stimuli associated with Nursing intervention like venepuncture, immunization .
- Effectiveness - ability to be successful and produce the intended results.

Non-pharmacological , Children , Procedural pain, Effectiveness

CONCLUSION:

First level of evidences regarding efficacy of non-pharmacological management of procedural pain among children of various age group during procedure shows that all methods result in to some degree of analgesia but none are completely effective and there is no clearly superior method. In 2nd level evidences nurses belief that non-pharmacological methods act as a facilitator for pain relief among children and experts also provide opinion to consider non-pharmacological methods for pain relief because these methods provide comfort and wellbeing to the child during nursing procedures. After getting various level of evidence on efficacy of non-pharmacological management of procedural pain among children nurses in various setting of children care like NICU, PICU and paediatric ward can use the evidences and technique in providing effective care by managing the pain during nursing procedures and minimising the use of pain relieving medications which may have long term side effects on children.

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