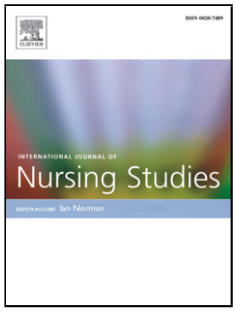

Title: Effect of non-nutritive sucking and sucrose alone and in combination for repeated procedural pain in preterm infants: A randomized controlled trial

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PII: S0020-7489(18)30085-3
DOI: https://doi.org/10.1016/j.ijnurstu.2018.04.006
Reference: NS 3131

To appear in:

Received date: 8-8-2017
Revised date: 4-4-2018
Accepted date: 5-4-2018

Please cite this article as: Gao, Haixia, Li, Mei, Gao, Honglian, Xu, Guihua, Li, Fang, Zhou, Jing, Zou, Yunsu, Jiang, Honghua, Effect of non-nutritive sucking and sucrose alone and in combination for repeated procedural pain in preterm infants: A randomized controlled trial.International Journal of Nursing Studies https://doi.org/10.1016/j.ijnurstu.2018.04.006

Effect of non-nutritive sucking and sucrose alone and in combination for repeated procedural pain in preterm infants: A randomized controlled trial

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ABSTRACT

Background: Sucrose combined with non-nutritive sucking provided better pain relief than sucrose or non-nutritive sucking alone in a single painful procedure. However, whether the combination of non-nutritive sucking with sucrose could obtain a significant difference in analgesic effect of the repeated procedural pain than any single intervention has not been established.
Objective: To compare the effect of non-nutritive sucking and sucrose alone and in combination of repeated procedural pain in preterm infants.
Design: Randomized controlled trial.
Setting: A level III neonatal intensive care unit of a university hospital in China.
Method: Preterm infants born before 37 weeks of gestation were randomly assigned to four groups: routine care group (routine comfort through gentle touch when infants cried; n=21), non-nutritive sucking group (n=22), sucrose group (0.2ml/kg of 20%; n=21), sucrose (0.2ml/kg of 20%) plus non-nutritive sucking group (n=22). Each preterm infant received three nonconsecutive routine heel sticks. Each heel stick included three phases: baseline (the last 1 minute of the 30 minutes without stimuli), blood collection, recovery (1 min after blood collection). Three phases of 3 heel stick procedures were videotaped. Premature infant pain profile (PIPP) score, heart rate, oxygen saturation and percentage of crying time were assessed by five independent evaluators who were blinded to the purpose of the study at different phases across three heel sticks. Data were analyzed by analysis of variance, with repeated measures at different evaluation phases of heel stick.