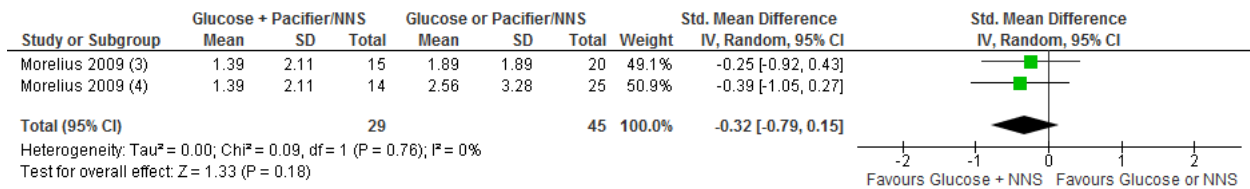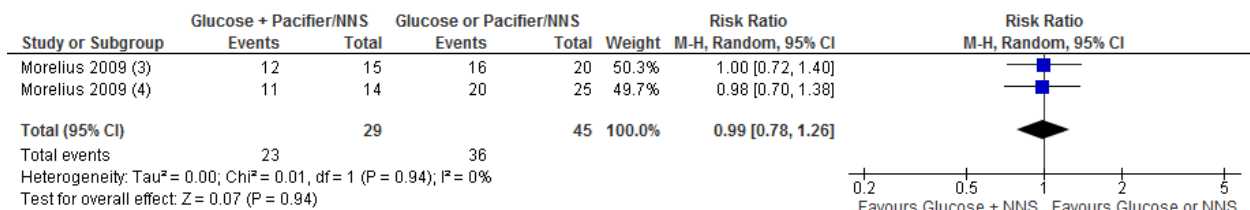**Revman Plots: Sweet-tasting solution (sucrose, glucose) and non nutritive sucking compared to sweet-tasting solution (sucrose, glucose) or non nutritive sucking child up to 2 yrs**
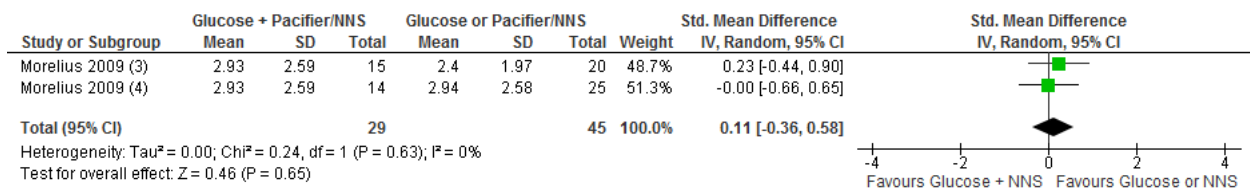
Distress Acute + Recovery

	Glucose + Pacifier/NNS			Glucose or Pacifier/NNS				Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Morelius 2009 (3)	1.39	2.11	15	1.89	1.89	20	49.1%	-0.25 [-0.92, 0.43]	
Morelius 2009 (4)	1.39	2.11	14	2.56	3.28	25	50.9%	-0.39 [-1.05, 0.27]	
Total (95% CI)			29			45	100.0%	-0.32 [-0.79, 0.15]	

Heterogeneity: Tau² = 0.00; Chi² = 0.09, df = 1 (P = 0.76); I² = 0%
Test for overall effect: Z = 1.33 (P = 0.18)

-2 -1 0 1 2
Favours Glucose + NNS Favours Glucose or NNS

Distress Acute + Recovery (yes/no)

	Glucose + Pacifier/NNS		Glucose or Pacifier/NNS			Risk Ratio	Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
Morelius 2009 (3)	12	15	16	20	50.3%	1.00 [0.72, 1.40]	
Morelius 2009 (4)	11	14	20	25	49.7%	0.98 [0.70, 1.38]	
Total (95% CI)		29		45	100.0%	0.99 [0.78, 1.26]	
Total events	23		36				

Heterogeneity: Tau² = 0.00; Chi² = 0.01, df = 1 (P = 0.94); I² = 0%
Test for overall effect: Z = 0.07 (P = 0.94)

0.2 0.5 1 2 5
Favours Glucose + NNS Favours Glucose or NNS

Parent Fear (Acute)

	Glucose + Pacifier/NNS			Glucose or Pacifier/NNS				Std. Mean Difference	Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	IV, Random, 95% CI
Morelius 2009 (3)	2.93	2.59	15	2.4	1.97	20	48.7%	0.23 [-0.44, 0.90]	
Morelius 2009 (4)	2.93	2.59	14	2.94	2.58	25	51.3%	-0.00 [-0.66, 0.65]	
Total (95% CI)			29			45	100.0%	0.11 [-0.36, 0.58]	

Heterogeneity: Tau² = 0.00; Chi² = 0.24, df = 1 (P = 0.63); I² = 0%
Test for overall effect: Z = 0.46 (P = 0.65)

-4 -2 0 2 4
Favours Glucose + NNS Favours Glucose or NNS

Author(s): VS/AT
Date: 2015-03-26
Question: Should sweet-tasting solutions (sucrose, glucose) before vaccine injections and non nutritive sucking during vaccine injections vs sweet-tasting solutions or non nutritive sucking alone be used for reducing vaccine injection pain in children 0-2 years?
Settings: clinics
Bibliography: Morelius 2009 (3,4)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Sweet-tasting solutions (sucrose, glucose) before vaccine injections and non nutritive sucking during vaccine injections	Sweet-tasting solutions or non nutritive sucking alone	Relative (95% CI)	Absolute		
Distress Acute + Recovery[1,2] (measured with: validated tools (cry duration) by researcher; Better indicated by lower values)												
1	randomised trials[3]	very serious[4,5]	no serious inconsistency	no serious indirectness	serious[6]	none	29	45	-	SMD 0.32 lower (0.79 lower to 0.15 higher)[1,2]	⊕OOO VERY LOW	CRITICAL
Distress Acute + Recovery (yes/no)[1,2] (assessed with: validated tool (cry, yes/no) by researcher)												
1	randomised trials	very serious[4,5]	no serious inconsistency	no serious indirectness	serious[6]	none	23/29 (79.3%)	36/45 (80%)	RR 0.99 (0.78 to 1.26)[1,2]	8 fewer per 1000 (from 176 fewer to 208 more)	⊕OOO VERY LOW	CRITICAL
Parent Fear (Acute)[1,7] (measured with: validated tool (Visual Analog Scale 0-10) ; Better indicated by lower values)												
1	randomised trials[3]	very serious[4,5]	no serious inconsistency	no serious indirectness	serious[6]	none	29	45	-	MD 0.11 higher (0.36 lower to 0.58 higher)[1,7]	⊕OOO VERY LOW	IMPORTANT
Safety, Procedure Outcomes, Use of Intervention, Vaccine Compliance, Preference, Satisfaction (assessed with: no data were identified for these important outcomes)												

0	No evidence available					none	-	-	-	-		IMPORTANT
								0%		-		

[1] The sample size for the glucose and pacifier group was divided by 2.

[2] Treatment fidelity with non nutritive sucking was not assessed in included study

[3] In study by Morelius (2009), analysis (3) compared glucose and pacifier to glucose and analysis (4) compared glucose and pacifier to pacifier. All of the infants were held.

[4] In 1 study (Morelius 2009), randomization of infants to the groups was based on whether or not they used a pacifier

[5] Immunizer not blinded; parent, researcher and outcome assessor not consistently blinded

[6] Confidence intervals cross the line of nonsignificance and the sample size was below the recommended optimum information size (OIS) of 400 for an effect size of 0.2

[7] Additional information and data provided by author (Morelius 2009)