

Supplemental Table 1. - Baseline sociodemographic and clinical characteristics of participants – Per-Protocol population

Participants' characteristics	Cold vibrating device (n = 172)	Topical anesthetic (n = 174)	Total (n = 346)
Age (year) - Mean (SD)	9.8 ± 3.9	10.0 ± 4.0	9.9 (3.9)
Sex - n (%)			
Girls	83 (51.9)	88 (52.4)	177 (52.1)
Boys	77 (48.1)	80 (47.6)	157 (47.9)
Types of needle-related procedure - n (%)			
Venipuncture	115 (72.8)	129 (76.8)	244 (74.9)
IV catheter	43 (27.2)	39 (23.2)	82 (25.1)
Previous experience(s) with needle-related procedure(s) † - n (%)			
Yes	102 (64.2)	107 (64.1)	209 (64.1)
No	57 (35.8)	60 (35.9)	117 (35.9)
Analgesia in the last 4 hours - n (%)			
Yes	60 (37.7)	60 (36.1)	120 (36.9)
No	99 (62.3)	104 (62.7)	203 (62.5)
Don't know	0 (0.0)	2 (1.2)	2 (0.6)
Site of the needle-related procedure - n (%)			
Antecubital	121 (76.1)	130 (78.3)	251 (77.2)
Hand	26 (16.4)	33 (19.9)	59 (18.2)
Wrist	11 (6.9)	2 (1.2)	13 (4.0)
Other	1 (0.6)	1 (0.6)	2 (0.6)
Position during needle-related procedure - n (%)			
Dorsal decubitus	90 (56.3)	70 (42.2)	160 (49.1)
Sitting alone	54 (33.8)	68 (41.9)	122 (37.4)
Sitting on parents	11 (6.9)	20 (12.1)	31 (9.5)
Dorsal decubitus with restraint	5 (3.1)	7 (4.2)	12 (3.7)
Other	0 (0.0)	1 (0.6)	1 (0.3)
Non-pharmacological co-intervention - n (%)			
Yes	29 (18.1)	32 (19.1)	61 (18.6)
No	131 (81.9)	134 (76.8)	265 (80.8)
Pre-procedural pain (CAS) - Mean (SD)	2.9 (2.6)	2.6 (2.7)	2.7 (2.6)
Pre-procedural pain (FPS-R) - Mean (SD)	2.8 (2.7)	2.8 (3.0)	2.8 (2.8)
Pre-procedural distress (PBCL) - Mean (SD)	9.6 (3.5)	9.1 (2.5)	9.3 (3.1)
Pre-procedural distress (CFS) - Mean (SD)	1.7 (1.4)	1.5 (1.4)	1.6 (1.4)

CAS : Color Analogue Scale ; **FPS-R** : Faces Pain Scale - Revised ; **PBCL** : Procedure Behavioral Check List ; **CFS** : Children's Fear Scale

† Previous experience(s) with needle-related procedure(s) excluding vaccination related to the Quebec immunization program