JPED\_2019-220 - **SUPPLEMENTARY MATERIAL**

**Supplementary Table 1 - Motor development of preterm infants at 6 and 12 months of corrected age.**

| **Motor development** | **6 months (n = 41)** | **12 months (n = 41)** | **p** |
| --- | --- | --- | --- |
| AIMS |  |  |  |
| Total score – median (P25–P75) | 10 (5–23) | 10 (5–25) | 0.133a |
| Motor development – n (%) |  |  | 1.000b |
| Normal | 14 (34.1) | 15 (36.6) |  |
| Suspected delay | 27 (65.9) | 26 (63.4) |  |
| Denver II |  |  |  |
| Motor development – n (%) |  |  | 1.000b |
| Normal | 11 (26.8) | 12 (29.3) |  |
| Atypical development | 30 (73.2) | 29 (70.7) |  |

AIMS, Alberta Infant Motor Scale; Denver II, Denver Developmental Screening Test II; P25–P75, 25th–75th percentile.

a Calculated by Wilcoxon test.

b Calculated by McNemar test.

**Supplementary Table 2 - Association between motor development (Denver II and AIMS) and sleep quality at 12 months of corrected age in preterm infants.**

| **Sleep quality**  **(BISQ scale)a** | **Denver II** | | | **AIMS** | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Normal**  **(n = 12)** | **Atypical development**  **(n = 28)** | **p** | **Normal**  **(n = 14)** | **Suspected delay**  **(n = 26)** | **p** |
| Birth order – n (%) |  |  | 0.353b |  |  | 0.483b |
| Oldest | 2 (16.7) | 10 (35.7) |  | 3 (21.4) | 9 (34.6) |  |
| Middle | 0 (0.0) | 1 (3.6) |  | 0 (0.0) | 1 (3.8) |  |
| Youngest | 10 (83.3) | 17 (60.7) |  | 11 (78.6) | 16 (61.5) |  |
| Sleeping arrangement – n (%) |  |  | 0.616b |  |  | 0.415b |
| Infant crib in a separate room | 3 (25.0) | 8 (28.6) |  | 4 (28.6) | 7 (26.9) |  |
| Infant crib in parents’ room | 0 (0.0) | 2 (7.1) |  | 0 (0.0) | 2 (7.7) |  |
| In parents' bed | 5 (41.7) | 11 (39.3) |  | 5 (35.7) | 11 (42.3) |  |
| Infant crib in room with sibling | 4 (33.3) | 5 (17.9) |  | 5 (35.7) | 4 (15.4) |  |
| Other | 0 (0.0) | 2 (7.1) |  | 0 (0.0) | 2 (7.7) |  |
| Sleep positionc – n (%) |  |  |  |  |  |  |
| On the child's belly | 4 (33.3) | 9 (32.1) | 1.000d | 5 (35.7) | 8 (30.8) | 1.000d |
| On the child's side | 5 (41.7) | 15 (53.6) | 0.730 | 7 (50.0) | 13 (50.0) | 1.000b |
| On the child's back | 7 (58.3) | 12 (42.9) | 0.580b | 6 (42.9) | 13 (50.0) | 0.921b |
| Nocturnal sleep duration (h) – mean ± SD | 9.0 ± 1.8 | 9.2 ± 1.6 | 0.708e | 8.8 ± 1.8 | 9.3 ± 1.6 | 0.321e |
| Daytime sleep duration (min) – mean ± SD | 126 ± 40.2 | 118 ± 55.0 | 0.659e | 123.2 ± 50.7 | 119.4 ± 51.5 | 0.825e |
| No. of nighttime awakenings – median (P25–P75) | 1 (0–1) | 1 (0–2) | 0.328f | 0.5 (0–1) | 1 (0–2) | 0.130f |
| Duration of nocturnal wakefulness (min) – median (P25–P75) | 5 (0–19) | 5 (0–30) | 0.328f | 5 (0–20) | 5 (0–30) | 0.664f |
| Settling time until falling asleep (min) – median (P25–P75) | 30 (16–30) | 30 (16–30) | 0.988f | 30 (19–30) | 30 (15–34) | 0.967f |
| Method of falling asleep – n (%) |  |  | 0.707b |  |  | 0.816b |
| While feeding | 5 (41.7) | 9 (32.1) |  | 6 (42.9) | 8 (30.8) |  |
| Being rocked | 4 (33.3) | 6 (21.4) |  | 4 (28.6) | 6 (23.1) |  |
| Being held | 0 (0.0) | 1 (3.6) |  | 0 (0.0) | 1 (3.8) |  |
| In bed alone | 2 (16.7) | 10 (35.7) |  | 3 (21.4) | 9 (34.6) |  |
| In bed near parents | 1 (8.3) | 2 (7.1) |  | 1 (7.1) | 2 (7.7) |  |
| Nocturnal sleep-onset time – median (P25–P75) | 22 (21–23) | 21.5 (21–23) | 0.673f | 22 (21–23) | 21.5 (21–23) | 0.318f |
| The child's sleep is considered – n (%) |  |  | 0.294b |  |  | 0.208b |
| A very serious problem | 1 (8.3) | 2 (7.1) |  | 1 (7.1) | 2 (7.7) |  |
| A small problem | 0 (0.0) | 5 (17.9) |  | 0 (0.0) | 5 (19.2) |  |
| Not a problem at all | 11 (9.17) | 21 (75.0) |  | 13 (92.9) | 19 (73.1) |  |

AIMS, Alberta Infant Motor Scale; BISQ, Brief Infant Sleep Questionnaire; Denver II, Denver Developmental Screening Test II; P25–P75, 25th–75th percentile; SD, standard deviation.

a One family refused to answer the BISQ.

b Calculated by Pearson’s chi-squared test.

c Multiple answers allowed.

d Calculated by Fisher’s exact test.

e Calculated by Student’s *t*-test for independent samples.

f Calculated by Mann-Whitney test.

**Supplementary Table 3 - Characteristics of preterm infants at 4-5 years of chronological age.**

|  |  |
| --- | --- |
| **Variable** | **n = 36a** |
| Age (months) – mean ± SD | 53.9 ± 5.0 |
| Female – n (%) | 23 (63.9) |
| Parents’ level of education – n (%)b |  |
| Less than high school degree | 20 (62.5) |
| High school degree | 9 (28.1) |
| University degree or beyond | 3 (9.4) |
| Parents live together – n (%)b | 18 (56.3) |
| Family income – n (%)b, c |  |
| Up to 1 minimum wage | 4 (12.5) |
| From 1 to 2 minimum wages | 14 (43.8) |
| From 3 to 5 minimum wages | 6 (18.8) |
| From 6 to 10 minimum wages | 7 (21.9) |
| From 11 to 19 minimum wages | 1 (3.1) |

SD, standard deviation.

a Of the original study group of 41 preterm infants, five families dropped out of the study, resulting in a sample of 36 children for analysis at age 4-5 years.

b Four families did not answer this question (n = 32).

c Income classes as defined by the Brazilian Institute of Geography and Statistics (IBGE).

**Supplementary Table 4 - Sleep quality and motor development of preterm infants at 4-5 years of chronological age.**

| **Variable** | **n = 36** |
| --- | --- |
| Sleep quality (SDSC factor) |  |
| Data on child’s sleep |  |
| Nocturnal sleep duration (h) – mean ± SD | 9.3 ± 1.1 |
| Time until falling asleep (min) – median (P25–P75) | 15 (6–20) |
| SDSC score – mean ± SD |  |
| Disorders of initiating and maintaining sleep | 11.4 ± 3.2 |
| Sleep breathing disorders | 5.31 ± 2.07 |
| Disorders of arousal | 4.03 ± 1.84 |
| Sleep-wake transition disorders | 11.7 ± 3.4 |
| Disorders of excessive somnolence | 5.53 ± 1.14 |
| Sleep hyperhidrosis | 3.88 ± 2.04 |
| Overall score | 41.8 ± 8.6 |
| Motor development (PEDI score) |  |
| Self-care – n (%) |  |
| Delayed (< 30) | 5 (13.9) |
| Normal (≥ 30) | 31 (86.1) |
| Mobility – n (%) |  |
| Delayed (< 30) | 5 (13.9) |
| Normal (≥ 30) | 31 (86.1) |
| Social function – n (%) |  |
| Delayed (< 30) | 7 (19.4) |
| Normal (≥ 30) | 29 (80.6) |
| Overall scorea |  |
| Delayed (< 30) | 13 (36.1) |
| Normal (≥ 30) | 23 (63.9) |

P25–P75, 25th–75th percentile; PEDI, Pediatric Evaluation of Disability Inventory; SD, standard deviation; SDSC, Sleep Disturbance Scale for Children.

a Age-adjusted score of < 30 in at least one of the PEDI domains.