**Supplementary Material**

Article titled: Episodic and prospective memory difficulties in 13-year-old children born very preterm

Supplementary Table 1

*Items from the Prospective Memory Test*

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Item instruction | Time delay (mins) | Cue type |
| Short-term items | | | |
| Practice | “Draw a smiley face on the notepad [point to notepad] in exactly one minutes’ time.” | 1 | Time |
| Item 1 | Ask the participant to hand examiner their notepad and play them a timer sound. “When this timer goes off, remind me to give the notepad back to you [point to the notepad].” | 15 | Event |
| Item 2 | “It’s time for a break now! You will need to remember what time to come back. Come back to this room in 15 minutes, which will be at X\_o’clock, and knock on the table [knock on the table].” | 15 | Time |
| Item 3 | Replay the timer sound to the participant. “When you hear this timer go off again, remind me that it is time for a break soon.” | 45 | Event |
| Item 4 | “It’s time for a lunch break! You do not have to remember what time to come back this time, but I will ask you to remember to do something once you’re back after the break. Write your name on the notepad [tap on notepad] in 45 minutes, which will be at \_o’clock.” | 45 | Time |
| Item 5 | “We will be doing some activities away from the table. When I ask you to sit back at the table, get a pen from the cup of stationery [point to cup].” | 10 | Event |
| Item 6 | “Give me this post-it-note in exactly 5 minutes, which will be at X o’clock [hand the note to the participant].” | 5 | Time |
| Long-term items | | | |
| Item 7 | “After dinner tonight, call this number [hand the participant a card with a mobile number]. You will reach voicemail, and all you need to do is say ‘hi! It’s <child’s name>’.” | Same day | Event |
| Item 8 | Explain how to fill in and mail a questionnaire. “Fill in this questionnaire [point to questionnaire] and return it to me before next <insert day one week from today>.” | One week | Time |

Supplementary Table 2

*Comparison of Participants with Those Lost to Follow-Up at 13 Years on Important Characteristics*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | VP  Group | VP lost to  follow-up | Term  Group | Term lost to  follow-up |
|  | (*n* = 81) | (*n* = 37) | (*n* = 26) | (*n* = 15) |
| Gestational age (weeks), *M* (*SD*) | 27.5 (*1.5*) | 27.0 (*1.6*) | 39.5 (*1.3*) | 39.7 (*1.2*) |
| Birthweight (grams), *M* (*SD*) | 1056.7 (*256*.*9*) | 916.3 (*265.8*) | 3528.2 (*461.4*) | 3438.6 (*475.5*) |
| Male sex, *n* (%) | 41 (*51*) | 19 (*51*) | 12 (*46*) | 8 (*53*) |
| Multiple birth, *n* (%) | 27 (*33*) | 12 (*32*) | - | - |
| Antenatal corticosteroids, *n* (%) | 68 (*84*) | 31 (*84*) | - | - |
| Postnatal corticosteroids, *n* (%) | 3 (*4*) | 2 (*5*) | - | - |
| BPD, *n* (%) | 22 (*27*) | 13 (*35*) | - | - |
| Proven/suspected NEC, *n* (%) | 8 (*10*) | 9 (*24*) | - | - |
| Moderate-severe WMI, *n* (%) | 7 (*10*)a | 3 (*10*)a | - | - |
| IVH grade III/IV, *n* (%) | 4 (*5*) | 2 (*5*) | - | - |
| Cystic PVL, *n* (%) | 2 (*2*) | 1 (*3*) | - | - |
| Higher social risk, *n*, (%) | 34 (*47*)b | 14 (*67*)b | 9 (*38*)b | 6 (*43*)b |

*Note.* VP= very preterm; *n* = number; *M* = mean; *SD* = standard deviation; BPD = bronchopulmonary dysplasia; NEC = necrotizing enterocolitis; WMI = white matter injury; IVH = intraventricular hemorrhage; PVL = periventricular leukomalacia.

aMRI data available for *n* = 72 participants and *n* = 31 lost to follow-up.

bSocial risk data from 4-years available for 72 VP participants and 21 VP participants lost to follow-up, and for 24 term participants and 14 term participants lost to follow-up.

Supplementary Table 3

*Memory Outcomes and Rates of Below Age-Expected Performancea in Children Born Very Preterm Compared with Term-Born Controls, Excluding Those with Developmental Delay*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Memory Outcomes | | | | Rates of Below Age-Expected Performancea | | | |
|  | VP  (*n* = 75)b | Term  (*n* = 26) | Adjusted mean group differences | | VP  (*n* = 75)b | Term  (*n* = 26) | Adjusted Odds Ratio | |
|  | M (*SD*) | M (*SD*) | *b*(95% CI)c | *p* | *n* (%) | *n* (%) | OR (95%CI)c | *p* |
| Visuospatial episodic memory (CMS DL) | | | | |  |  |  |  |
| Spatial learning | 9.4 (3.4) | 11.2 (2.4) | -1.7 (-2.9 to -0.5) | .005 | 15 (20) | 1 (4) | 5.8 (0.7 to 47.0) | .09 |
| Spatial immediate recall | 10.0 (3.0) | 11.5 (1.8) | -1.4 (-2.4 to -0.5) | .003 | 16 (21) | 1 (4) | 6.1 (0.8 to 49.0) | .08 |
| Spatial delayed recall | 10.5 (2.9) | 12.0 (2.3) | -1.3 (-2.4 to -0.3) | .01 | 8 (11) | 1 (4) | 2.2 (0.3 to 19.1) | .47 |
| Verbal episodic memory (CMS WP) | | | | |  |  |  |  |
| Verbal learning | 8.4 (2.9) | 9.9 (2.1) | -1.5 (-2.6 to – 0.4) | .008 | 23 (31) | 3 (12) | 3.7 (0.9 to 14.7) | .06 |
| Verbal immediate recall | 10.1 (3.4) | 11.7 (2.7) | -1.5 (-2.8 to -0.1) | .03 | 10 (14) | 1 (4) | 3.2 (0.4 to 29.1) | .30 |
| Verbal delayed recall | 10.8 (3.2) | 12.6 (2.5) | -1.7 (-2.9 to -0.6) | .004 | 9 (12) | 0 (0) | N/Ad | N/A |
| Verbal delayed recognition | 9.9 (2.8) | 11.1 (0.5) | -1.1 (-1.8 to -0.5) | .001 | 9 (12) | 0 (0) | N/Ad | N/A |
| Prospective memory | | | | |  |  |  |  |
| Total score | 12.3 (2.8) | 13.5 (1.9) | -1.1 (-2.1 to -0.2) | .01 | 23 (31) | 4 (15) | 2.4 (0.7 to 8.3) | .14 |
| Time-based | 5.7 (1.7) | 6.8 (1.3) | -0.9 (-1.5 to -0.3) | .004 | 29 (39) | 5 (19) | 2.5 (0.8 to 7.5) | .10 |
| Event-based | 6.6 (1.6) | 6.7 (1.4) | -0.2 (-0.8 to 0.4) | .55 | 18 (24) | 6 (23) | 1.1 (0.4 to 3.3) | .89 |
| Short-term | 9.4 (2.2) | 10.6 (1.5) | -1.1 (-2.0 to -0.4) | .003 | 34 (46) | 6 (23) | 3.0 (1.0 to 7.9) | .05 |
| Long-term | 2.9 (1.3) | 2.9 (1.1) | -0.02 (-0.5 to 0.5) | .92 | 12 (16) | 3 (12) | 1.3 (0.3 to 5.3) | .72 |
| Everyday memory (OMQ-PF) | | | | |  |  |  |  |
| Total score | 100.1 (17.7) | 116.2 (12.2) | -16.1 (-23.2 to -9.0) | <.001 | 45 (60) | 3 (12) | 11.6 (3.1 to 43.5) | <.001 |

*Note.* All models adjusted for social risk, while linear regression models comparing prospective and everyday memory also adjusted for corrected age at assessment. VP = very preterm; *n* = number; *M* = mean; *SD* = standard deviation; *b* = regression coefficient representing mean group differences; CI = confidence interval; OR = odds ratio; CMS = Children’s Memory Scale; DL = Dot Locations subtest; WP = Word Pairs subtest; OMQ-PF = Observer Memory Questionnaire-Parent Form; N/A = not applicable.

aBelow age-expected performance defined as more than 1 SD below normative mean for age-standardized measures (CMS subtests), or more than 1 SD below the term group mean for all remaining measures (Prospective memory test, OMQ-PF).

b*n* ranges from 74 to 75 due to missing outcome data.

c*N* ranges from 99 to 100 due to missing outcome and social risk data.

dOdds ratio unable to be computed due to cell size of zero in one group.