\*Corresponding author:

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## Gender and prematurity

Male gender (yes, no), part of multiple births (yes, no), gestation indicated by number of weeks of pregnancy and birth weight in relation to gestation classi ed as normal, small for gestational age (<2500 g) and very small for gestational age (<1500 g).

## **Childhood illness**

Parental judgment of children's general health (very good, good, fair/bad), length of any hospital stay (never, 1, 2-7, 8-14, 15 days), occurrence of seizures (never, once, more than once), seizures with fever (yes, no), cold lasting more than 3 days (never, 1-3 times, 4-6 times, >6 times), ear ache (never, 1-3 times, 4-6 times), glue ear 4.1(es), g)-6.9(l)11.9(es, 4-6 t-C /1(t)-6(h (v)0)T>>BDC BT/T11 1 Tf6 tEMC /Span <</Me

on any of the language outcomes. Variables that were moderately predictive for favourable language performance at age 2 were high birth order, large family size, early age of rst walking, o en singing and o en reading with the child. ese variables were also moderately predictive for receptive language skills at age 3. For this outcome, maternal and paternal education and o en playing with toys together with the child were moderately predictive as well. e only moderately predictive variables for expressive language at age 3 were singing and o en reading with the child and the child's having ear tubes. A priori selected USPSPF risk factors were included in multivariable regression analysis. From the remaining variables all those statistically signi cant in the univariable regression analysis were included as well (Tables 2-5). In the logistic regression analysis, we included gender, birth order, age of rst walking, singing with the child and reading with the child, as these were the most predictive variables (moderate e ect size) for at least two of the three outcomes in the univariable regression analysis.

At age 2, the total set of predictors explained 25% of the total variance in language scores (eta-squared=.248, F(1, 81) = 6.21; p < .001). Moderately predictive for better language were low birth order,

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| Maternal age               | 0.01 | -0.01 / 0.03 | 0.568 |
|----------------------------|------|--------------|-------|
| Maternal educational level |      |              |       |
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| How often playing games with child <sup>b</sup> |  |   |  |
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| Prevocational secondary education                                  | -0.04                   | -0.54 / 0.45  |        |
|--|-------------------------|---------------|--------|
| Senior secondary vocational education                              | 0.04                    | -0.37 / 0.44  |        |
| General secondary education  | 0.30                    | -0.17 / 0.78  |        |
| Higher professional education                                      | 0.26                    | -0.13 / 0.66  |        |
| Neurobiological development  |                         |               |        |
| Hand preference <sup>b</sup> (no preference yet = reference)       |                         |               | 0.054  |
| Right  | 0.26                    | 0.02 / 0.50   |        |
| Left   | -0.01                   | -0.38 / 0.37  |        |
| Age of , rst walking <sup>b</sup>                                  | -0.14*                  | -0.19 / -0.10 | <0.001 |
| Social environment   |                         |               |        |
| How often singing with child <sup>b</sup> (6-7 days p week = refer | 0.003                   |               |        |
| 0-1 day p. week  | -0.39                   | -0.86 / 0.08  |        |
| 2-3 days p. week   | -0.58                   | -0.89 / -0.27 |        |
| 4-5 days p. week   | -0.11                   | -0.37 / 0.16  |        |
| How often reading with child <sup>b</sup> (6-7 days p week = refer | ence)                   |               | <0.001 |
| 0-1 day p. week  | -0.93*                  | -1.34 / -0.51 |        |
| 2-3 days p. week   | -0.47                   | -0.75 / -0.19 |        |
| 4-5 days p. week   | -0.07                   | -0.32 / 0.19  |        |
| How often playing with toys together with child $^{\rm b}$ (6-7 d  | ays p week = reference) |               | 0.477  |
| 0-1 day p. week  | -0.41                   | -1.04 / 0.22  |        |
| 2-3 days p. week   | -0.17                   | -0.48 / 0.14  |        |
| 4-5 days p. week   | -0.10                   | -0.35 / 0.14  |        |

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high education of the mother and o en singing with the child (Table 3). We found that gender, length of hospital stay, age of rst walking, mother's profession and reading with the child were predictive as well, although the e ect sizes were small.

At age 3, the total set of variables explained 13% of the total variance in receptive language scores (eta-squared = .128, F (1, 47) = 5.40; p < .001). Like at age 2, low birth order was moderately predictive for better receptive language skills (Table 4). Again, small positive e ects were found for high education of the mother, early age of rst walking and o en reading with the child. Small family size was predictive as well.

e total variance explained in expressive language scores at age 3 was 14% (eta-squared=.137, F(1, 61) = 4.64; p < .001). A large family and a stammering mother were moderate predictors for worse expressive language at this age (Table 5). B1 Tf0.13 Tw 9 0 0 9 4r wresm20085 Tm[(len)8(gt)-6end12()3(s21(r)92.1(a)8(b1d = .w)8n exp)12.1(r)13(e3(aa2ETEM1)8(b1d = .w)8n exp)12(e3(aa2ETEM1)8(b1d = .w)8n exp)12(e3(aa2ETEM1)8(b1d = .w)8n exp)12(e3(aa2

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more parental involvement in language stimulation activities. Parental education level and/or profession did not signi cantly contribute to language performance at these ages. However, singing and reading with the child on a daily basis as compared to no more than once a week appeared to improve the child's language performance signi cantly. is may indicate that these language stimulation activities are probably more or less equally distributed among socioeconomic classes