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| ST1. A taxonomy of multilevel models for change predicting children’s Chinese expressive vocabulary (EVT) across three-time data collection | | | | |
|  | Unconditional means model | Unconditional growth model | Growth model with idiom usage | Growth model with idiom usage and covariates |
| Intercept | 48.95\*\*\* | 40.12\*\*\* | 36.24\*\*\* | -88.53\*\* |
|  | (4.35) | (3.89) | (5.02) | (26.93) |
| Time |  | 1.36\*\*\* | 1.22\*\*\* | 1.23\*\*\* |
|  |  | (0.16) | (0.21) | (0.20) |
| Idiom usage |  |  | 2.13 | 1.07 |
|  |  |  | (1.77) | (1.28) |
| Time \* Idiom usage |  |  | 0.08 | 0.07 |
|  |  |  | (0.07) | (0.07) |
| T1 age |  |  |  | 1.09\*\*\* |
|  |  |  |  | (0.32) |
| Family type a |  |  |  | 25.53\*\*\* |
|  |  |  |  | (6.10) |
| Maternal education |  |  |  | 2.91\* |
|  |  |  |  | (1.16) |
| Level 2 variance (initial status) | 24.10\*\*\* | 21.40\*\*\* | 21.21\*\*\* | 14.13\*\*\* |
|  | (3.24) | (2.91) | (2.94) | (2.27) |
| Level 2 variance (rate of change) | | 0.49\* | 0.47\* | 0.44\* |
|  |  | (0.16) | (0.15) | (0.16) |
| Level 1 variance (within-person residual) | 11.33\*\*\* | 6.83\*\*\* | 6.87\*\*\* | 6.96\*\*\* |
| (0.99) | (0.61) | (0.61) | (0.63) |
| N | 98 | 98 | 98 | 98 |
| Deviance | 836.12 | 771.54 | 770.11 | 740.51 |
| AIC | 842.12 | 783.54 | 786.11 | 762.51 |
| BIC | 849.88 | 799.05 | 806.79 | 790.94 |
| Note. SE in parentheses; \* *p*<0.05, \*\* *p*<0.01, \*\*\* *p*<0.001; a Chinese-Chinese families coded as 1 in family type. | | | | |

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| ST2. A taxonomy of multilevel models for the robustness check | | | | | |
|  | Final model | 1. Without top 6% Outliners | 2. Chinese-Chinese families | 2. Transnational families | 3. Idioms delimitation b |
| Intercept | -100.35\*\*\* | -104.14\*\*\* | -84.42\*\*\* | -4.09 | -101.72\*\*\* |
|  | (22.13) | (21.37) | (23.28) | (25.11) | (22.41) |
| Time | 1.30\*\*\* | 0.86\*\*\* | 1.35\*\*\* | 0.66 | 1.24\*\*\* |
|  | (0.21) | (0.22) | (0.22) | (0.48) | (0.23) |
| Idiom usage | -0.70 | -1.34 | -1.50 | 4.45\*\* | -0.51 |
|  | (1.04) | (2.14) | (1.14) | (1.57) | (0.95) |
| Time \* Idiom usage | 0.33\*\*\* | 0.76\*\*\* | 0.26\*\*\* | 0.87\*\*\* | 0.29\*\*\* |
|  | (0.08) | (0.12) | (0.07) | (0.23) | (0.07) |
| T1 age | 1.45\*\*\* | 1.50\*\*\* | 1.72\*\*\* | 0.16 | 1.44\*\*\* |
|  | (0.26) | (0.25) | (0.30) | (0.25) | (0.26) |
| Family type a | 22.24\*\*\* | 25.33\*\*\* |  |  | 21.93\*\*\* |
|  | (5.01) | (5.09) |  |  | (5.01) |
| Maternal Education | 2.36\* | 2.34\*\* | 2.06 | 0.34 | 2.47\* |
|  | (0.95) | (0.91) | (1.13) | (0.88) | (0.96) |
| Level 2 variance (initial status) | 10.68\*\*\* | 10.38\*\*\* | 11.06\*\*\* | 0.26 | 10.76\*\*\* |
|  | (2.08) | (1.99) | (2.38) | (3.10) | (2.08) |
| Level 2 variance (rate of change) | 0.47 | 0.33 | 0.37 | 0.56 | 0.52 |
|  | (0.32) | (0.16) | (0.40) | (0.40) | (0.29) |
| Level 1 variance (within-person residual) | 7.20\*\*\* | 6.61\*\*\* | 6.68\*\*\* | 7.08\*\*\* | 7.16\*\*\* |
| (0.93) | (0.63) | (1.02) | (1.30) | (0.92) |
| N | 98 | 87 | 71 | 27 | 98 |
| Deviance | 734.17 | 632.06 | 524.90 | 179.62 | 735.33 |
| AIC | 756.17 | 654.06 | 544.90 | 199.62 | 757.33 |
| BIC | 784.60 | 681.18 | 567.53 | 212.58 | 785.76 |
| *Note*. SE in parentheses; \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; a Chinese-Chinese families coded as 1 in family type; b See ST3 for the inclusion of idioms for the robustness check. | | | | | |

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| ST3. A list of excluded four-character phrases in the transcripts and overview | | | | | | | | | | | | | |
| No. | **Idioms in Chinese** | **Pinyin** | **Literal (verbatim) meaning** | **Non-literal (figurative) meaning** | **Transcripts** | | | **Online idiom dictionaries** | | | | **Corpus** | **Robustness check** |
| **Idiom typesa** | **Idiom tokensb** | **Hanci Wang (汉辞网)** | | **Han Dian (汉典)** | | **Taiwan Academy Dictionary of Chinese Idioms  (成语典)c** | **Occurrences in CCL Classical Chinese Corpus** |
| 1 | 笑容满面 | xiào róng mǎn miàn | Smile-expression-full-face | Describes someone with a broad, happy smile. | 1 | 1 | | Yes | | No | Yes | 58 | No |
| 2 | 三五一群 | sān wǔ yì qún | Three-five-one-groups | Describes the act of gathering as small groups (similar to 三五成群). | 2 | 2 | | No | | No | No | 0 | Yes |
| 3 | 心事沉沉 | xīn shì chén chén | Heart-matter-heavy-heavy | Describes a heavy sense of worry or preoccupation (similar to 心事重重). | 1 | 1 | | No | | No | No | 0 | Yes |
| 4 | 张口大骂 | zhāng kǒu dà mà | Open-mouth-big-scold | Describes someone cursing or scolding loudly and severely (similar to 破口大骂). | 1 | 1 | | No | | No | No | 0 | Yes |
| 5 | 大吼大叫 | dà hǒu dà jiào | Big-roar-big-shout | Describes the act of shouting or yelling loudly. | 2 | 2 | | Yes | | No | No | 0 | Yes |
| 6 | 乐于助人 | lè yú zhù rén | Happy-in-helping-people | Describes someone willing to help others. | 1 | 1 | | Yes | | No | No | 0 | Yes |
| 7 | 叽里咕噜 | jī lǐ gū lū | Onomatopoeia | An onomatopoeic expression imitating the sound of whispering or muttering. | 1 | 1 | | Yes | | No | No | 0 | Yes |
| 8 | 不好意思 | bù hǎo yì si | No-good-idea-thought | Describes a mild apology or an embarrassment or a slight sense of shame. | 7 | 15 | | Yes | | Yes | No | 321 | Yes |
| 9 | 大大小小 | dà dà xiǎo xiǎo | Big-big-small-small | Describes all sizes, large and small. | 1 | 1 | | Yes | | No | Yes | 101 | Yes |
| 10 | 口吐白沫 | kǒu tǔ bái mò | Mouth-spit-white-foam | Describes someone as extremely angry or excited and speaks with great fervor or showing symptoms of severe illness or poisoning. | 1 | 1 | | No | | No | No | 38 | No |
| 11 | 兄弟姐妹 | xiōng dì jiě mèi | Brothers-Sisters | Siblings | 6 | 10 | | No | | No | No | 524 | No |
| 12 | 拔腿就跑 | bá tuǐ jiù pǎo | Pull-leg-then-run | Describes someone running away suddenly and swiftly. | 1 | 2 | | No | | No | No | 0 | No |
| 13 | 灵光一闪 | líng guāng yì shǎn | Spiritual-light-one-flash | Describes a moment of sudden insight, inspiration, or brilliance. | 1 | 1 | | No | | No | No | 0 | No |
| 14 | 开开心心 | kāi kāi xīn xīn | Open-open-heart-heart | Describes a happy and cheerful disposition. | 10 | 17 | | No | | No | No | 0 | No |
| 15 | 多多关照 | duō duō guān zhào | Much-much-take-care | A polite expression used to ask for someone's support, guidance, or assistance. | 2 | 2 | | No | | No | No | 0 | No |
| *Note.*a "Idiom types" refers to the occurrences of the idiom across transcripts, namely, the number of mothers that use the idiom; b "Idiom tokens" refers to the total occurrences of the idiom in all transcripts; C idioms are represented in traditional characters in the Taiwan Academy Dictionary of Chinese Idioms, but for consistency, they are in simplified characters in the table; CCL is Center for Chinese Linguistics; No. 1 was produced by a child and thus not included in either formal analyses or the robustness check; No. 2–4 differed from a Chinese idiom by only one character and were commonly misspoken, potentially due to performance errors; therefore, they were included in the robustness check; No. 5–7 were identified as Chinese idioms by one online dictionary but not by the CCL classical corpus and were included in a robustness check to test the impact of a strict delimitation of idioms; No. 8 and 9 were discrepancies found during the interrater reliability check and thus included in the robustness check; No. 10–15 were not recognized as Chinese idioms but phrases. | | | | | | | | | | | | | |