**TABLE 1** Child- and adult-reported necessities of life for children in Hong Kong1

|  |  |  |
| --- | --- | --- |
| **Child-reported items**  **(21 items)** | **Adult-reported items**  **(19 items)** | **Type**2 |
| ***Diet, Footwear and Clothing*** | |  |
| *Not included from child questionnaire* | 1. Three meals a day | M |
| *Not included from child questionnaire* | 1. Fresh fruit or vegetables at least once a day | M |
| *Not included from child questionnaire* | 1. Meat/fish/vegetarian equivalent at least twice a day | M |
| 1. Properly fitted shoes | 1. Properly fitted shoes | M |
| 1. School uniform of correct size | 1. School uniforms of correct size | M |
| 1. Able to have some new clothes | 1. Able to afford some new clothes | M |
| 1. Enough warm clothes for cold weather | 1. Enough warm clothes for cold weather | M |
| 1. Brand name trainers | 1. Brand name trainers | M |
| ***Children’s Items*** | |  |
| 1. Outdoor leisure equipment | 1. Outdoor leisure equipment | M |
| 1. Your own mobile phone | 1. Mobile phone for children aged 10 or older | M |
| 1. A computer device with internet connection at home | 1. A computer device with internet connection at home | M |
| 1. Educational games | 1. Educational games | M |
| 1. Books at home suitable for your ages | 1. Books at home suitable for their ages | M |
| ***Accommodation and Facilities*** | |  |
| 1. A suitable place at home to study or do homework | 14. A suitable place at home to study or do homework | M |
| 1. Somewhere nearby like a park where you can safely spend time with your friends | *Not included from adult questionnaire* | M |
| 1. Access to public transport like the railway networks or bus services | *Not included from adult questionnaire* | M |
| ***Children’s Own Money*** | |  |
| 1. Some pocket money each week to spend on yourself | 15. Pocket money for his/her own | M |
| 1. Some money that you can save each month, either in a bank or at home | *Not included from adult questionnaire* | M |
| ***Children’s Social and Extra-curricular Activities*** | |  |
| 1. Presents on special occasions | *Not included from adult questionnaire* | M |
| 1. Go out with friends or family for leisure activities at least once a month | *Not included from adult questionnaire* | M |
| 1. A meal out with friends at least once a month | 16. A meal out with friends at least once a month | S |
| 1. A family day trip at least four times a year | 17. A family day trip at least four times a year | S |
| 1. Participation in extra-curricular activities | 18. Participation in extra-curricular activities | S |
| 1. Tutorial lessons after school | 19. Tutorial lessons after school | S |

*Note.*

1. In total, there is 16 child-specific items and activities included for further analyses.
2. M – Material deprivation items; S – Social deprivation items.

**TABLE 2** Sociodemographic profiles of the study samples at Time 21

|  |  |  |
| --- | --- | --- |
|  | Children  (N = 636) | Adults  (N = 595) |
| **Individual characteristics** |  |  |
| *Gender* |  |  |
| Female | 288 | 394 |
| Male | 348 | 200 |
| *Age* |  |  |
| 0-9 | --- | --- |
| 10-14 | 285 | --- |
| 15-19 | 3512 | 83 |
| 20-39 | --- | 133 |
| 40-59 | --- | 352 |
| 60 or above | --- | 101 |
| *Mean Age (SD)* | --- | 47.3 (13.3) |
| *Birthplace* |  |  |
| Hong Kong | 541 | 248 |
| Other places | 93 | 346 |
| **Household characteristics** |  |  |
| *Number of working adults in the household* |  |  |
| 0 | 75 | 55 |
| 1 | 238 | 225 |
| 2 | 263 | 246 |
| 3+ | 59 | 67 |
| *Equivalised household income* |  |  |
| 1st quintile (lowest) | 156 | 129 |
| 2nd quintile | 102 | 85 |
| 3rd quintile | 137 | 126 |
| 4th quintile | 97 | 74 |
| 5th quintile (highest) | 136 | 164 |
| *Number of siblings / children* |  |  |
| 0 | 351 | 173 |
| 1 | 232 | 291 |
| 2 | 33 | 115 |
| 3+ | 20 | 16 |

*Note.*

1. Figures may not be added up to total N due to missing data.

2. There is a total of 101 children who are below 18 at Time 1 and they are ages 18-19 at Time 2.

3. There is a total of eight adults aged 19 at Time 2.

**TABLE 3** Children and adult perceptions of necessities of life: Heat mapping and relative risk ratios

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Items** | Child-derived necessities (*N* = 636) | | | | Adult-derived necessities (*N* = 595) | | | | Relative risk (RR) | | | |
| Necessary (%) | SE | 95 CI | | Yes  (%) | SE | 95 CI | | RR | 95 CI | | sig |
| School uniform | 94.9 | .010 | .925 | .966 | 99.3 | .003 | .985 | .997 | .957 | .936 | .978 | \*\* |
| Fitted shoes | 91.2 | .012 | .886 | .933 | 99.1 | .004 | .978 | .997 | .922 | .897 | .947 | \*\* |
| Warm clothes | 90.2 | .013 | .873 | .924 | 99.8 | .002 | .984 | 1.000 | .909 | .884 | .934 | \*\* |
| Suitable place to study | 86.8 | .014 | .837 | .893 | 95.5 | .011 | .927 | .973 | .896 | .860 | .932 | \*\* |
| A computer with internet | 86.3 | .015 | .832 | .890 | 90.2 | .012 | .875 | .924 | .954 | .912 | .996 | .03 |
| Pocket money | 84.6 | .015 | .814 | .874 | 90.7 | .014 | .875 | .932 | .916 | .874 | .959 | \*\* |
| Mobile phone | 82.3 | .016 | .789 | .852 | 84.2 | .016 | .807 | .872 | .974 | .923 | 1.025 | .31 |
| Suitable books | 75.0 | .020 | .710 | .787 | 94.5 | .012 | .917 | .964 | .778 | .726 | .829 | \*\* |
| Extra-curricular activities | 71.5 | .019 | .676 | .752 | 89.1 | .014 | .860 | .916 | .802 | .744 | .860 | \*\* |
| Meal out with friends | 66.5 | .020 | .624 | .704 | 87.1 | .015 | .839 | .898 | .761 | .696 | .827 | \*\* |
| Educational games | 56.7 | .022 | .523 | .611 | 84.2 | .016 | .807 | .872 | .684 | .605 | .763 | \*\* |
| New clothes | 56.1 | .022 | .517 | .605 | 93.0 | .013 | .900 | .951 | .601 | .529 | .673 | \*\* |
| Tutorial lessons | 53.0 | .023 | .485 | .575 | 81.3 | .017 | .777 | .844 | .665 | .577 | .753 | \*\* |
| Outdoor leisure equipment | 52.9 | .022 | .485 | .572 | 85.8 | .016 | .823 | .887 | .620 | .539 | .702 | \*\* |
| Family day trip | 40.1 | .022 | .358 | .445 | 72.6 | .020 | .686 | .763 | .570 | .461 | .679 | \*\* |
| Brand name trainers | 37.3 | .021 | .333 | .415 | 69.4 | .020 | .653 | .733 | .539 | .425 | .654 | \*\* |

*Note.*

1. \*\* indicates significant relative risk ratios between the two groups at *p* < .001.

**TABLE 4** Multi-level logistic regression outcomes

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **FITTED SHOES** | | | | **NEW CLOTHES** | | | | **LEISURE EQUIPMENT** | | | | | **MOBILE PHONE** | | | | |
| MODEL RESULTS | Estimate | S.E. | P-Value | OR | Estimate | S.E. | P-Value | OR | Estimate | S.E. | P-Value | OR | Estimate | | S.E. | P-Value | OR |
| Intercept | -3.68 | 1.03 | 0.00 |  | -0.82 | 0.56 | 0.15 |  | 0.13 | 0.44 | 0.80 |  | -1.27 | | 0.50 | 0.01 |  |
| **GROUP (Adult = 1)** | **2.90** | **0.65** | **0.00** | **18.21** | **3.41** | **0.39** | **0.00** | **30.27** | **2.37** | **0.29** | **0.00** | **10.71** | **0.83** | | **0.25** | **0.00** | **2.30** |
| SEX (Female = 1) | 0.85 | 0.41 | 0.04 | 2.35 | -0.12 | 0.23 | 0.62 | 0.89 | 0.03 | 0.21 | 0.87 | 1.03 | 0.04 | | 0.21 | 0.86 | 1.04 |
| BIRTHPLACE (HK = 1) | -0.07 | 0.56 | 0.90 | 0.93 | -0.13 | 0.31 | 0.68 | 0.88 | 0.16 | 0.26 | 0.55 | 1.17 | 0.03 | | 0.26 | 0.92 | 1.03 |
| NOCHILD | -0.06 | 0.28 | 0.83 | 0.94 | -0.19 | 0.19 | 0.30 | 0.83 | -0.04 | 0.14 | 0.78 | 0.96 | 0.20 | | 0.17 | 0.22 | 1.23 |
| WORKADU (1) | 0.06 | 0.74 | 0.93 | 1.06 | 0.87 | 0.48 | 0.07 | 2.40 | 0.46 | 0.38 | 0.23 | 1.58 | 0.07 | | 0.40 | 0.86 | 1.07 |
| WORKADU (2) | 0.44 | 0.79 | 0.57 | 1.56 | 0.19 | 0.49 | 0.70 | 1.21 | 0.33 | 0.42 | 0.43 | 1.39 | -0.17 | | 0.43 | 0.69 | 0.84 |
| WORKADU (3) | 1.77 | 1.18 | 0.14 | 5.86 | 0.71 | 0.67 | 0.29 | 2.04 | 0.60 | 0.59 | 0.31 | 1.82 | 0.46 | | 0.64 | 0.47 | 1.58 |
| HHINCOME (1) | 0.63 | 0.84 | 0.46 | 1.87 | -0.08 | 0.44 | 0.85 | 0.92 | -0.12 | 0.40 | 0.77 | 0.89 | 0.19 | | 0.39 | 0.62 | 1.21 |
| HHINCOME (2) | -0.72 | 0.70 | 0.31 | 0.49 | -0.79 | 0.38 | 0.04 | 0.45 | -0.25 | 0.34 | 0.46 | 0.78 | -0.22 | | 0.33 | 0.50 | 0.80 |
| HHINCOME (3) | -0.78 | 0.77 | 0.31 | 0.46 | -0.31 | 0.44 | 0.48 | 0.73 | -0.14 | 0.38 | 0.72 | 0.87 | 0.22 | | 0.39 | 0.57 | 1.25 |
| HHINCOME (4) | -1.68 | 0.69 | 0.02 | 0.19 | -0.85 | 0.42 | 0.04 | 0.43 | -0.26 | 0.37 | 0.48 | 0.77 | 0.35 | | 0.36 | 0.33 | 1.42 |
| -2\*log | 338.34 (*df* = 13) | | | | 875.41 (*df* = 13) | | | | 1007.98 (*df* = 13) | | | | | 787.43 (*df* = 13) | | | | |
|  | **INTERNET** | | | | **MEAL OUT** | | | | **POCKET MONEY** | | | | | **SCHOOL UNIFORM** | | | | |
|  | Estimate | S.E. | P-Value | OR | Estimate | S.E. | P-Value | OR | Estimate | S.E. | P-Value | OR | Estimate | | S.E. | P-Value | OR |
| Intercept | -1.92 | 0.55 | 0.00 |  | -0.29 | 0.42 | 0.49 |  | -1.58 | 0.68 | 0.02 |  | -3.74 | | 1.20 | 0.00 |  |
| **GROUP (Adult = 1)** | **0.97** | **0.28** | **0.00** | **2.65** | **1.75** | **0.25** | **0.00** | **5.73** | **1.89** | **0.38** | **0.00** | **6.63** | **2.41** | | **0.65** | **0.00** | **11.13** |
| SEX (Female = 1) | -0.06 | 0.25 | 0.82 | 0.94 | -0.08 | 0.20 | 0.69 | 0.92 | 0.11 | 0.26 | 0.68 | 1.11 | 0.75 | | 0.41 | 0.07 | 2.11 |
| BIRTHPLACE (HK = 1) | 0.10 | 0.29 | 0.73 | 1.10 | 0.35 | 0.24 | 0.15 | 1.41 | 0.39 | 0.36 | 0.28 | 1.48 | 0.89 | | 0.51 | 0.08 | 2.42 |
| NOCHILD | -0.10 | 0.17 | 0.54 | 0.90 | -0.06 | 0.12 | 0.63 | 0.94 | -0.05 | 0.22 | 0.84 | 0.96 | -0.51 | | 0.35 | 0.14 | 0.60 |
| WORKADU (1) | 0.61 | 0.45 | 0.17 | 1.83 | 0.20 | 0.33 | 0.54 | 1.23 | 0.19 | 0.53 | 0.73 | 1.21 | 1.53 | | 0.84 | 0.07 | 4.60 |
| WORKADU (2) | 0.17 | 0.48 | 0.72 | 1.19 | -0.29 | 0.35 | 0.40 | 0.75 | -0.38 | 0.56 | 0.51 | 0.69 | 1.77 | | 0.88 | 0.04 | 5.88 |
| WORKADU (3) | 1.26 | 0.69 | 0.07 | 3.52 | 0.05 | 0.52 | 0.93 | 1.05 | 0.59 | 0.83 | 0.48 | 1.80 | 2.31 | | 1.36 | 0.09 | 10.09 |
| HHINCOME (1) | -0.13 | 0.43 | 0.77 | 0.88 | 0.27 | 0.34 | 0.44 | 1.30 | 0.60 | 0.48 | 0.22 | 1.82 | -0.04 | | 0.96 | 0.97 | 0.96 |
| HHINCOME (2) | -0.48 | 0.39 | 0.21 | 0.62 | 0.51 | 0.31 | 0.11 | 1.66 | 0.63 | 0.46 | 0.17 | 1.88 | -1.11 | | 0.90 | 0.22 | 0.33 |
| HHINCOME (3) | 0.51 | 0.52 | 0.33 | 1.66 | 0.74 | 0.37 | 0.05 | 2.09 | 0.21 | 0.52 | 0.68 | 1.24 | -0.71 | | 1.05 | 0.50 | 0.49 |
| HHINCOME (4) | -0.65 | 0.41 | 0.11 | 0.52 | 0.32 | 0.32 | 0.32 | 1.38 | 0.53 | 0.48 | 0.27 | 1.71 | -2.16 | | 0.95 | 0.02 | 0.12 |
| -2\*log | 671.64 (*df* = 13) | | | | 961.18 (*df* = 13) | | | | 619.22 (*df* = 13) | | | | | 253.66 (*df* = 13) | | | | |
|  | **EDUCATIONAL GAME** | | | | **SUITABLE BOOKS** | | | | **SUITABLE PLACE TO STUDY** | | | | | **EXTRA-CURRICULAR ACTIVITIES** | | | | |
|  | Estimate | S.E. | P-Value | OR | Estimate | S.E. | P-Value | OR | Estimate | S.E. | P-Value | OR | Estimate | | S.E. | P-Value | OR |
| Intercept | -0.36 | 0.41 | 0.37 |  | -2.52 | 0.66 | 0.00 |  | -1.77 | 0.56 | 0.00 |  | -0.36 | | 0.47 | 0.45 |  |
| **GROUP (Adult = 1)** | **1.44** | **0.22** | **0.00** | **4.22** | **2.59** | **0.38** | **0.00** | **13.38** | **1.64** | **0.36** | **0.00** | **5.14** | **1.83** | | **0.27** | **0.00** | **6.22** |
| SEX (Female = 1) | 0.12 | 0.19 | 0.53 | 1.12 | 0.09 | 0.23 | 0.69 | 1.10 | 0.88 | 0.25 | 0.00 | 2.41 | 0.03 | | 0.22 | 0.88 | 1.03 |
| BIRTHPLACE (HK = 1) | -0.07 | 0.22 | 0.77 | 0.94 | -0.24 | 0.34 | 0.48 | 0.79 | 0.26 | 0.34 | 0.45 | 1.29 | 0.37 | | 0.28 | 0.19 | 1.44 |
| NOCHILD | -0.14 | 0.13 | 0.28 | 0.87 | -0.29 | 0.21 | 0.16 | 0.75 | -0.24 | 0.17 | 0.17 | 0.79 | 0.04 | | 0.15 | 0.82 | 1.04 |
| WORKADU (1) | 0.56 | 0.34 | 0.10 | 1.75 | -0.58 | 0.51 | 0.25 | 0.56 | 0.18 | 0.48 | 0.71 | 1.20 | 0.92 | | 0.40 | 0.02 | 2.50 |
| WORKADU (2) | 0.28 | 0.36 | 0.44 | 1.32 | -0.97 | 0.54 | 0.07 | 0.38 | -0.65 | 0.53 | 0.22 | 0.52 | 0.62 | | 0.44 | 0.16 | 1.86 |
| WORKADU (3) | 0.99 | 0.48 | 0.04 | 2.68 | -0.81 | 0.65 | 0.21 | 0.44 | -0.84 | 0.65 | 0.19 | 0.43 | 0.23 | | 0.60 | 0.70 | 1.26 |
| HHINCOME (1) | -0.08 | 0.33 | 0.80 | 0.92 | 0.35 | 0.46 | 0.44 | 1.42 | 0.32 | 0.47 | 0.49 | 1.38 | -0.24 | | 0.43 | 0.58 | 0.79 |
| HHINCOME (2) | -0.20 | 0.31 | 0.51 | 0.82 | 0.53 | 0.42 | 0.21 | 1.70 | 0.66 | 0.44 | 0.13 | 1.94 | -0.36 | | 0.38 | 0.34 | 0.70 |
| HHINCOME (3) | 0.01 | 0.35 | 0.98 | 1.01 | -0.07 | 0.44 | 0.87 | 0.93 | 0.77 | 0.51 | 0.13 | 2.16 | -0.11 | | 0.43 | 0.80 | 0.90 |
| HHINCOME (4) | -0.44 | 0.32 | 0.17 | 0.65 | 0.00 | 0.43 | 1.00 | 1.00 | 0.64 | 0.45 | 0.15 | 1.90 | -0.38 | | 0.42 | 0.36 | 0.69 |
| HHINCOME (4) | -0.44 | 0.32 | 0.17 | 0.65 | 0.00 | 0.43 | 1.00 | 1.00 | 0.64 | 0.45 | 0.15 | 1.90 | -0.38 | | 0.42 | 0.36 | 0.69 |
| -2\*log | 1038.35 (*df* = 13) | | | | 726.85 (*df* = 13) | | | | 546.44 (*df* = 13) | | | | | 882.19 (*df* = 13) | | | | |
|  | **TUTORIAL** | | | |  | | | |  |  |  |  | |  |  |  |  | |
|  | Estimate | S.E. | P-Value | OR |  |  |  |  |  |  |  |  |  | |  |  |  |
| Intercept | -0.43 | 0.45 | 0.34 |  |  |  |  |  |  |  |  |  |  | |  |  |  |
| **GROUP (Adult = 1)** | 1.87 | 0.23 | 0.00 | 6.50 |  |  |  |  |  |  |  |  |  | |  |  |  |
| SEX (Female = 1) | -0.03 | 0.19 | 0.89 | 0.97 |  |  |  |  |  |  |  |  |  | |  |  |  |
| BIRTHPLACE (HK = 1) | 0.18 | 0.23 | 0.43 | 1.19 |  |  |  |  |  |  |  |  |  | |  |  |  |
| NOCHILD | -0.09 | 0.15 | 0.54 | 0.91 |  |  |  |  |  |  |  |  |  | |  |  |  |
| WORKADU (1) | 0.04 | 0.38 | 0.92 | 1.04 |  |  |  |  |  |  |  |  |  | |  |  |  |
| WORKADU (2) | -0.23 | 0.41 | 0.57 | 0.79 |  |  |  |  |  |  |  |  |  | |  |  |  |
| WORKADU (3) | 0.29 | 0.55 | 0.60 | 1.34 |  |  |  |  |  |  |  |  |  | |  |  |  |
| HHINCOME (1) | -0.08 | 0.39 | 0.85 | 0.93 |  |  |  |  |  |  |  |  |  | |  |  |  |
| HHINCOME (2) | -0.39 | 0.36 | 0.28 | 0.68 |  |  |  |  |  |  |  |  |  | |  |  |  |
| HHINCOME (3) | -0.05 | 0.40 | 0.90 | 0.95 |  |  |  |  |  |  |  |  |  | |  |  |  |
| HHINCOME (4) | -0.53 | 0.39 | 0.18 | 0.59 |  |  |  |  |  |  |  |  |  | |  |  |  |
| HHINCOME (4) | -0.09 | 0.15 | 0.54 | 0.91 |  |  |  |  |  |  |  |  |  | |  |  |  |
| -2\*log | 1007.98 (*df* = 13) | | | |  |  |  |  |  |  |  |  |  | |  |  |  |

***Note.***

1. Number of observations varied from 912 (i.e., warm clothes) to 976 (i.e., fitted shoes) due to missing data.

2. Number of strata was 35 and number of clusters was 417 (except “extra-curricular activities” which had 416 clusters).

3. Complex-sample-design features incorporated in the models.

4. “Warm clothes” was not reported. See Endnotes 10.

**FIGURE 1** Differences between children’s and adults’ perceptions of necessities of life (%)