The impacts of outdoor time-use on children's school readiness.

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Abstract:

The children's time use in early childhood may be important for their cognitive and non-cognitive development. Recently, COVID-19 pandemic and the associated lockdown measure to curb the transmission of the disease has significantly reduced the amount of time children can spend outdoors. This raises a concern about possible negative effects on young children and the development of affected generations. Using the time use diaries (TUDs) from the Longitudinal Study of Australian Children (LSAC) combined with historical weather data from the Bureau of Meteorology (BOM), this study investigates the effect of outdoor time on their school readiness and the difference of the time spent outdoors between native children and immigrant children from various cultural backgrounds. Our results show that children with Asian backgrounds and other immigrant backgrounds spend significantly less time outdoors than native children and children with English-speaking backgrounds (ESB). In addition, we exploit the exogenous variations in the precipitation reported in the TUD assigned on a random day to predict the amount of outdoor time children spend daily and use this to estimate the marginal effect of daily outdoor time on children's school readiness. We find that the outdoor time has a negative effect on children's performance in the Who Am I (WAI) test, which requires more fine motor skills but has insignificant effects on Peabody Picture Vocabulary Test (PPVT-III) score, which focuses on vocabulary and language development. Our research contributes to the literature of how children's time allocation influences their development. Besides, we also tackle the measurement error issue, which is common in the research using data from time-use diaries.

Keywords: outdoor activities, time use diary, longitudinal survey, education, ethnicity

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