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More play and fewer screens – a way to improve preschoolers' mental health? Cross-sectional findings from the British Preschool-children's Play Survey

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Background

Children increasingly engage in more screentime and less play. Concurrently, 10% of UK children now have a diagnosable mental health condition. Adventurous play (ie, thrilling and exciting play, likely inducing fear or uncertainty) might prevent mental health problems but is unexplored in preschoolers. We assessed the association between mental health and both adventurous play and screentime, hypothesising that more adventurous play and less screentime would be associated with better mental health.

Methods

This cross-sectional study used data from a nationally representative sample of caregivers of children aged 2–4 years. Participants were recruited through YouGov in February 2023 and gave informed consent (Cambridge University Ethics HSSREC.22-312). We derived three behavioural exposures and four mental health outcomes from parent-report. Exposures were time (in h/week) a child spent playing adventurously, looking at a screen for educational purposes, and looking at a screen for recreational purposes. Outcomes were: internalising and externalising score from the Strengths and Difficulties Questionnaire (SDQ) and positive and negative affect scores from the Positive and Negative Affect Schedule for Children-P (PANAS). We conducted linear regression to explore associations between the three behavioural exposures and four mental health outcomes. We also tested for interactions between adventurous play and each screentime. We adjusted for child and parental demographic variables, using a Bonferroni-corrected α (0.0125).

Findings

Care-givers of 1079 children provided valid data for all variables (age 2: n=319 [30%], age 3: 384 [36%], age 4: 376 [35%]; female n=517 [48%], male n=562 [52%]; white: n=878 [81%], mixed ethnicity: n=80 [7%], other: n=221 [11%]). For each additional hour per week a

children engaged in adventurous play, they had lower internalising (β -0.02 , 95% CI -0.03 to -0.00) and externalising (-0.02 , -0.03 to -0.00) scores, and higher positive affect (0.06 , 0.05 to 0.08). Compared with 0–2 h/week of educational screentime, longer educational screentime was associated with higher internalising scores (4–6 h: 1.42 , 0.62 to 2.21 ; ≥ 6 h: 2.56 , 1.40 to 3.72) and negative affect (4–6 h: 1.54 , 0.84 to 2.23 ; ≥ 6 h: 2.17 , 0.88 to 3.46). Recreational screentime was not associated with outcomes. No significant interactions were identified.

Interpretation

Adventurous play was associated with better mental health, whereas high educational screentime was associated with poorer mental health; although effect sizes were small. Consistent with research in older children, associations with positive affect were stronger than mental health symptoms. No significant effect of recreational screentime was found, possibly due to underreporting, as it might be deemed less socially desirable than educational screentime, where effects were seen. Reliance on parental-report remains a limitation of this study. Nevertheless, this is the first work to demonstrate that diverse play opportunities for preschools, including taking risks, might be important for their mental health.

Keywords

Play; screentime; mental health; preschool

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Contributions

Both authors conceived of, conceptualised and were involved in developing the study. Both authors reviewed and cleaned the data, KH conducted the analyses, and both authors were involved in drafting, reviewing and editing the abstract.

Conflicts of interest

KH declares no conflict of interest; HD has been an unpaid trustee of Play England since Autumn 2022.