LONGITUDINAL ASSOCIATIONS BETWEEN SCREEN TIME AND CHILDREN'S BEHAVIOURAL AND EMOTIONAL ADJUSTMENT AT AGE 7

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Background and objectives Research on whether children’s screen time impacts on their adjustment mainly focuses on television (TV) use, and seldom considers more interactive forms of screen entertainment such as computers. Longitudinal population studies suggest negative effects of high TV use in young children on externalising behaviour including aggression and attentional problems. However, evidence (particularly for inattention/hyperactivity) is mixed and timing of exposure may be critical. Existing UK studies of effects of screen time on young children are cross-sectional.

Objectives To investigate whether heavy TV and computer use in early childhood predict behavioural and emotional adjustment at age 7.

Methods Data came from 11,014 children in the UK Millennium Cohort Study. Mothers reported child’s daily TV use at ages 3 and 5, using four-point and six-point scales respectively. Children were divided into four groups: ‘sustained low’ (< 3 h daily at 3 and 5 years), ‘sustained high’ (3 h daily at 3 and 5 years), ‘increasing’ (< 3 h at 3, 3 h at 5 years) and ‘decreasing’ (3 h at 3, < 3 h at 5 years). Computer use was reported by mothers using a six-point scale at age 5, and divided into ‘low’ (< 3 h) or ‘high’ (3 h). Teachers reported adjustment using the Strength and Difficulties questionnaire when children were aged 7. Multivariate analyses of conduct problems, emotional symptoms, peer problems, inattention/hyperactivity, total difficulties and prosocial behaviour controlled for socio-demographics; maternal health; family functioning; and child’s sleeping difficulties, physical activity, cognitive ability and relevant prior adjustment score.

Results At ages 3 and 5, respectively 17% and 15% watched TV for more than 3 h daily. 73% had sustained low, 5% sustained high, 10% increasing and 12% decreasing use. At age 5, 2% used computers for more than 3 h daily. In adjusted models, increasing TV use was associated with conduct problems ($\beta$ 0.18, 95% CI 0.06 to 0.30, $p = 0.003$) and total difficulties ($\beta$ 0.49, 95% CI 0.04 to 0.95, $p = 0.035$). Decreasing TV use was associated with lower inattention/hyperactivity ($\beta$ −0.21, 95% CI −0.39 to −0.04, $p = 0.019$). High computer use was associated with emotional symptoms ($\beta$ 0.37, 95% CI 0.09 to 0.64, $p = 0.009$). Associations with peer problems and prosocial behaviour were not significant. There were no significant interactions between gender and screen time.

Conclusion Patterns of TV and computer use are associated with some adjustment problems in young children, signalling the need to restrict hours of exposure for this age group.