Developmental Differences in Information Sampling Effort

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Abstract

Adolescence is marked by increased risky decisions. Making better decisions typically requires obtaining more information relevant to that decision. Adolescents may be especially tolerant of uncertainty when making decisions or averse to the effort needed to obtain more information. We had adolescents and adults complete an effort-based information sampling task, in which participants could sample information until deciding that the evidence obtained was sufficient for responding. Effort was manipulated by varying the number of mouse clicks required to sample information across trials. Surprisingly, adolescents sampled more than adults prior to responding at low effort and continued to sample more even as effort requirements increased. Computational modeling indicated that adolescents and adults used simple heuristics to decide between sampling more or responding but that adolescents sought a higher evidence threshold than adults. Adolescents may seek more information and be less averse to effort costs in information sampling compared with adults.