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The Development of Temporal Visual Attention: Evidence from a Rapid Serial Visual Presentation Task

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Abstract: A rapid serial visual presentation (RSVP) task, in which participants had to determine whether a face stimulus was embedded in a stream of distracter stimuli, was given to ninety-nine 6-10 year-olds. Presentation time was reduced from 500ms per stimulus to 100ms per stimulus, in 50ms steps. There was an effect of age on visual processing speed ($p < .01$), accuracy ($p < .01$) and response time ($p < .05$). Further analysis revealed that children aged 8 years and over can discriminate visual stimuli presented every 100ms, the speed typically used with adults. In addition, RSVP performance was significantly correlated with the digit span and object assembly subtests of the WISC-III ($p < .05$). Thus, our research reveals that visual processing speed is linked to general mental processing speed and short-term memory and that the RSVP paradigm presented here is appropriate for use with children aged 8 years and older.