

Exploring Attentional Mechanisms in Express Saccade Makers

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Express saccade makers (ESMs) produce high proportions (>30%) of low latency (80–130ms) express saccades (ES) in prosaccade overlap tasks. ESMs are much more frequent in Chinese compared to other populations (Amatya et al. 2012; Knox & Wolohan, 2013), allowing us to explore them in detail. ESM performance is stable over time (Knox & Wolohan, 2015) and their antisaccade performance is poor compared to non-ESMs (Knox et al. 2012), although this is not due to a deficit in oculomotor inhibitory control (Wolohan & Knox, 2014). We examined the performance of 18 ESMs and 46 nonESMs, classified by their performance on 200 prosaccade overlap trials, in a classic manual-response cueing paradigm. Participants completed 300 trials in which an eccentric target appearance (left/right randomised) was preceded by a spatially nonpredictive peripheral cue (valid, invalid or neutral; cue SOA 100 150ms). While expected cueing effects were observed (valid<invalid and valid <neutral: p 's<0.05; neutral<invalid: p <0.05), there was no group difference (ESM vs nonESM; p =0.12). This suggests that the oculomotor behaviour of ESMs cannot be explained by differences in attentional orienting and/or disengagement.

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