

An exploration of the effects of mind wandering on narrative production skills

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The term “mind wandering” (MW) refers to a shifting of attention away from a primary task toward internal thoughts. Growing evidence shows that MW affects performance on cognitive tasks. The aim of this study was to assess for the first time whether MW affects also narrative skills. Twenty-one healthy adults were recruited (age: $M = 24.05$ years; $SD = 4.44$; Range: 18-34). They completed two tasks assessing executive functions and attention (i.e., Stroop test and Attentional Network Task, ANT). A Sustained Attention to Response Task (SART) was employed to investigate the effect of MW on attentive skills through a probe-sampling methodology. Additional behavioural indices (i.e., no-go errors, reaction time coefficient variability, RTCV) were calculated. Moreover, the participants completed the Cognitive Failure Questionnaire (CFQ) and were asked to produce samples of narrative discourse by administering a story-telling task, that were analysed using a multilevel approach to discourse analysis. The relation between these scores was explored by using Pearson product-moment correlation coefficient. A strong positive correlation was found between number of MW episodes and the CFQ score ($r = 0.492$, $p < 0.023$) showing the relation between incidence of MW episodes and the subjective feeling of cognitive failures in daily-life. Furthermore, number of MW episodes correlated also with the Time-Interference measure of Stroop task ($r = 0.493$, $p < 0.023$) and the alerting effect derived from the ANT ($r = 0.478$, $p < 0.029$). Moreover, both no-go errors and RTCV at the SART showed a strong positive correlation with the production of Filler Utterances ($r = 0.611$, $p < 0.004$ and $r = 0.559$, $p < 0.010$, respectively). This suggests that MW also affects narrative skills, as those who experience more MW episodes tend to fill their descriptions with irrelevant comments. Overall, these findings support previous reports on the relation between mind wandering and executive functions and extend our knowledge on the side effects exerted by MW on narrative production skills.