Abstract:

The present study sought to investigate whether Parkinson's disease (PD) patients are impaired in their processing of action-related verbs when reading naturalistic stories. Previous research suggest that PD patients exhibit difficulties in naming, producing, remembering and identifying action verbs. A recent study (García et al., 2018) demonstrated that this specific deficit for PD patients was even upheld when reading naturalistic stories instead of isolated words or sentences. The present study is a replication of García et al.'s study (2018) in a Danish context, while at the same time an extension of it by including a crucial new contrast. To this end, we constructed 2 x 2 naturalistic stories in Danish, with each pair of stories closely matched on several linguistic factors (e.g. word frequency and readability). The first pair of texts closely mirroring García et al.'s design included one text with a high degree of action-content and one with a high degree of non-action content, while the second pair of texts integrated action and non-action content in both texts. With the extension of the second pair of texts, we sought to investigate whether the specific deficit for action content found in García et al.'s study could be due to a substantial build-up of action content over the course of one text compared to the other. 28 PD patients and 28 age- and gender-matched controls read the four stories and answered questions about situational (mainly time and place), action-related and non-action-related content. This allowed us to investigate the hypothesis that PD patients would perform worse on action content than on situational and non-action content compared to controls. Results showed no significant differences in performance between PD patients and controls, in fact, for several contrasts equivalence tests showed no practical difference between the two groups’ performances. However, we did see a significant main effect of question type as both groups generally performed worse on non-action-related questions compared to action-related and situational questions, suggesting that non-action content may be generally harder to remember (also when embedded in naturalistic stories). Our finding that Danish-speaking PD patients do not seem to be specifically impaired in their action language processing underlines the importance of testing such claims in cross-linguistic and cross-cultural designs. Further research is needed to properly delineate whether typological differences between Spanish and Danish affect PD patients language processing differently or whether the originally reported effects are less robust than first anticipated. In broader terms, research within the field of action language processing in PD patients is still in its early stages and it is thus still unclear whether action verb impairment is a sui generis affectation in PD.