

The Effect of Bilingualism on Prospective Memory

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Abstract : It is well established that bilinguals outperform monolinguals on executive function tasks. However, the effects of bilingualism on prospective memory (PM), which also requires executive functions, have not been investigated vastly. This study aimed to compare bi and monolingual participants' PM performance in focal and non-focal PM tasks. Considering that bilinguals have greater executive function abilities than monolinguals, we predict that bilinguals' PM performance would be higher than monolinguals on the non-focal PM task, which requires controlled monitoring processes. To investigate these predictions, we administered the focal and non-focal PM task and measured the PM and ongoing task performance. Forty-eight Turkish-English bilinguals residing in North Macedonia and forty-eight Turkish monolinguals living in Turkey between the ages of 18-30 participated in the study. They were instructed to remember responding to rarely appearing PM cues while engaged in an ongoing task, i.e., spatial working memory task. The focality of the task was manipulated by giving different instructions for PM cues. In the focal PM task, participants were asked to remember to press an enter key whenever a particular target stimulus appeared in the working memory task; in the non-focal PM task, instead of responding to a specific target shape, participants were asked to remember to press the enter key whenever the background color of the working memory trials changes to a specific color (yellow). To analyze data, we performed a 2×2 mixed factorial ANOVA with the task (focal versus non-focal) as a within-subject variable and language group (bilinguals versus monolinguals) as a between-subject variable. The results showed no direct evidence for a bilingual advantage in PM. That is, the group's performance did not differ in PM accuracy and ongoing task accuracy. However, bilinguals were overall faster in the ongoing task, yet this was not specific to PM cue's focality. Moreover, the results showed a reversed effect of PM cue's focality on the ongoing task performance. That is, both bi and monolinguals showed enhanced performance in the non-focal PM cue task. These findings raise skepticism about the literature's prevalent findings and theoretical explanations. Future studies should investigate possible alternative explanations.

Keywords : bilingualism, executive functions, focality, prospective memory

Conference Title : ICB 2023 : International Conference on Bilingualism

Conference Location : London, United Kingdom

Conference Dates : August 17-18, 2023