Lipka, S. & Clarke, L. (2014). Effects of time pressure and maths anxiety on solving mental arithmetic problems. Talk presented at BPS Cognitive Section Annual Conference, 2nd to 5th September 2014, Nottingham Trent University.

Abstract:

Time pressure and anxiety are thought to affect working memory (e.g., Hill & Wigfield, 1984; Eysenck et al., 2007). Previously, mental arithmetic tasks have been utilised as a measure of working memory (Matthews & Campbell, 2010). Due to the rise in interest in maths anxiety, the aim of the current study was to investigate the impact of time pressure on working memory performance in a maths anxious sample. The Mathematics Anxiety Scale (MAS-UK; Hunt, Clark-Carter & Sheffield, 2011) was utilised to categorise 40 individuals into high or low maths anxious groups. Participants later completed a mental arithmetic task under two different time pressure conditions. Results showed that there was no overall effect of maths anxiety on performance in the mental arithmetic task. However, performance was worse under high as compared to low time pressure. This effect was more pronounced for high-anxious than low-anxious individuals. Possible mechanisms underlying this effect are considered in terms of the Attentional Control Theory (ACT; Eysenck et al, 2007) and it is concluded that task-irrelevant thoughts resulting from time pressure are most likely to impair the processing efficiency and performance effectiveness of highly maths anxious individuals.