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Paced Auditory Serial Addition Task:
AN EXPERIMENTAL INVESTIGATION

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Abstract

This study investigated the effects of seven independent variables upon a Paced Auditory Serial Addition Task (PASAT; Gronwall & Sampson, 1974).

The main effects found were that arithmetic ability and a short-term memory measure were related to performance on this task. Interactive effects were found for measures of anxiety, sex and the strategy used in performing the PASAT.

Theories considered included those of Broadbent (1977), Neisser (1976), Kerr (1973), Kahneman (1973) and Broadbent (1971) with emphasis on the latter two. The findings are most easily interpreted in terms of Kahneman's (1973) theory. Broadbent's (1971) model could not account for the effects of environmental and task conditions upon information-processing capacity.

Further research is needed to examine the effects of individual abilities and biases in selective attention. Also it is suggested that perception and the allocation of effort policy (Kahneman, 1973) be studied further from Broadbent's (1977) perspective of global and local analysis of information.

Clinical implications for the interpretation of the PASAT are discussed. It is suggested that this test could be used more widely as a measure of selective attention. More specifically it is suggested that the administration instructions could be simplified where necessary; and error scores considered together with rate of performance. These measures give an indication of performance effectiveness.

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