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Investigating the impact of dividing attention on auditory and visual object memory

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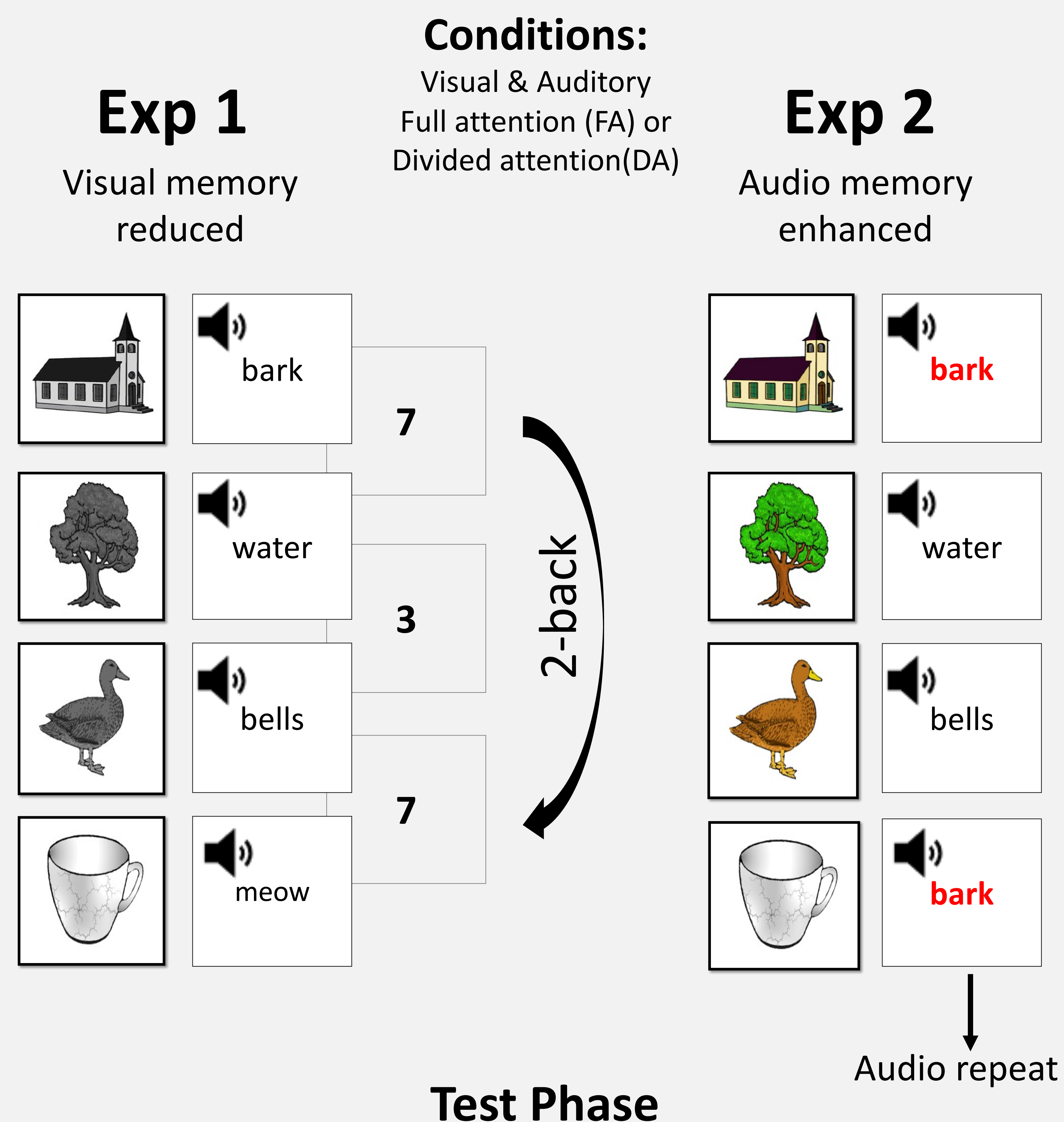
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Can visual and audio memory be equated?

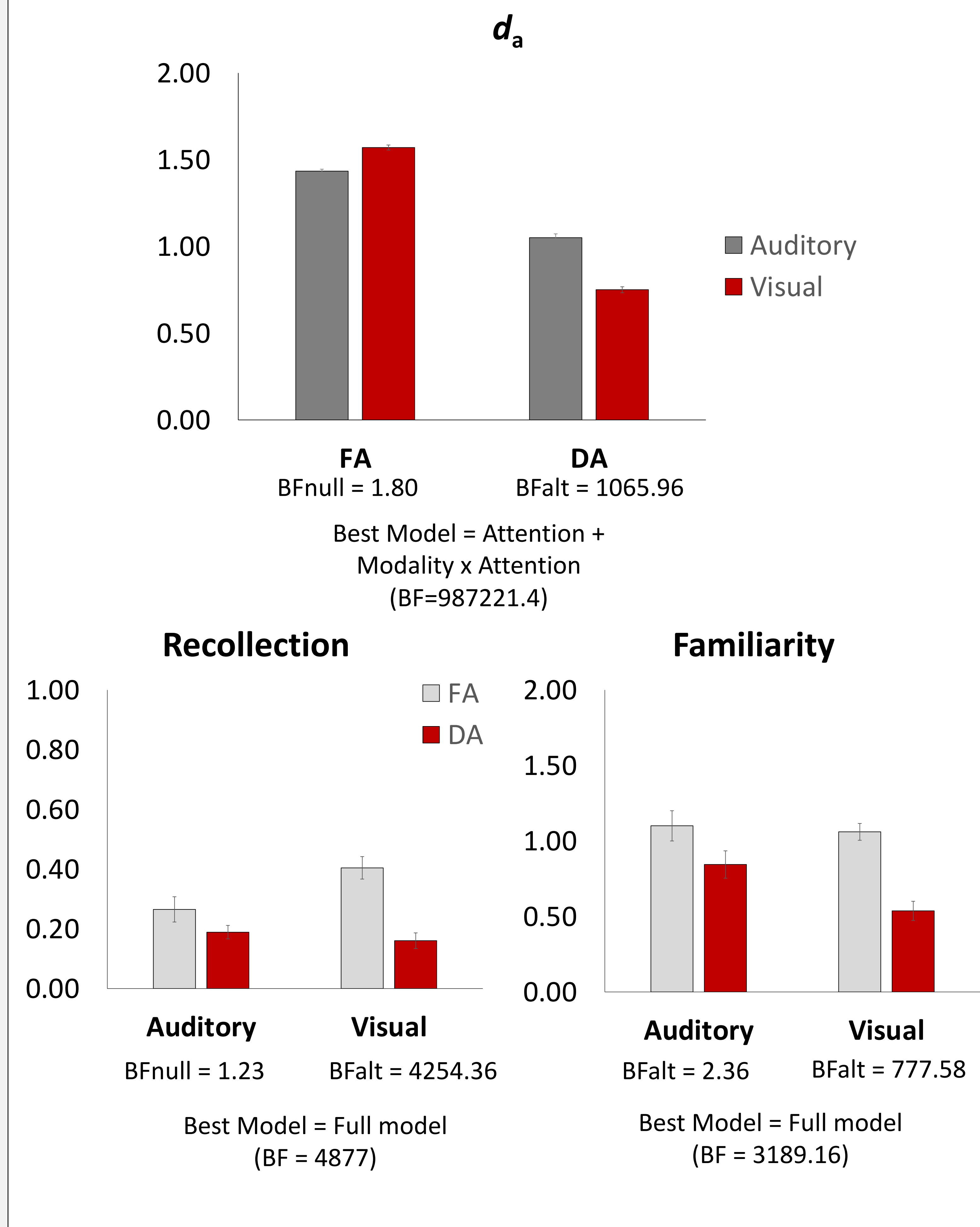
Recently, we found that dividing attention reduced recollection and familiarity for visual objects, but a different pattern emerged for auditory object memory: auditory object recollection was not affected by dividing attention. This could be attributable to differing levels of baseline performance with visual memory far exceeding auditory memory. Thus, we attempted to equate baseline performance in both modalities in order to adequately investigate the previous findings.

Exp 1: Attempted to reduce visual recognition to the level of auditory recognition (d_a) by speeding up encoding time (500 ms) and using greyscale images for the visual stimuli.

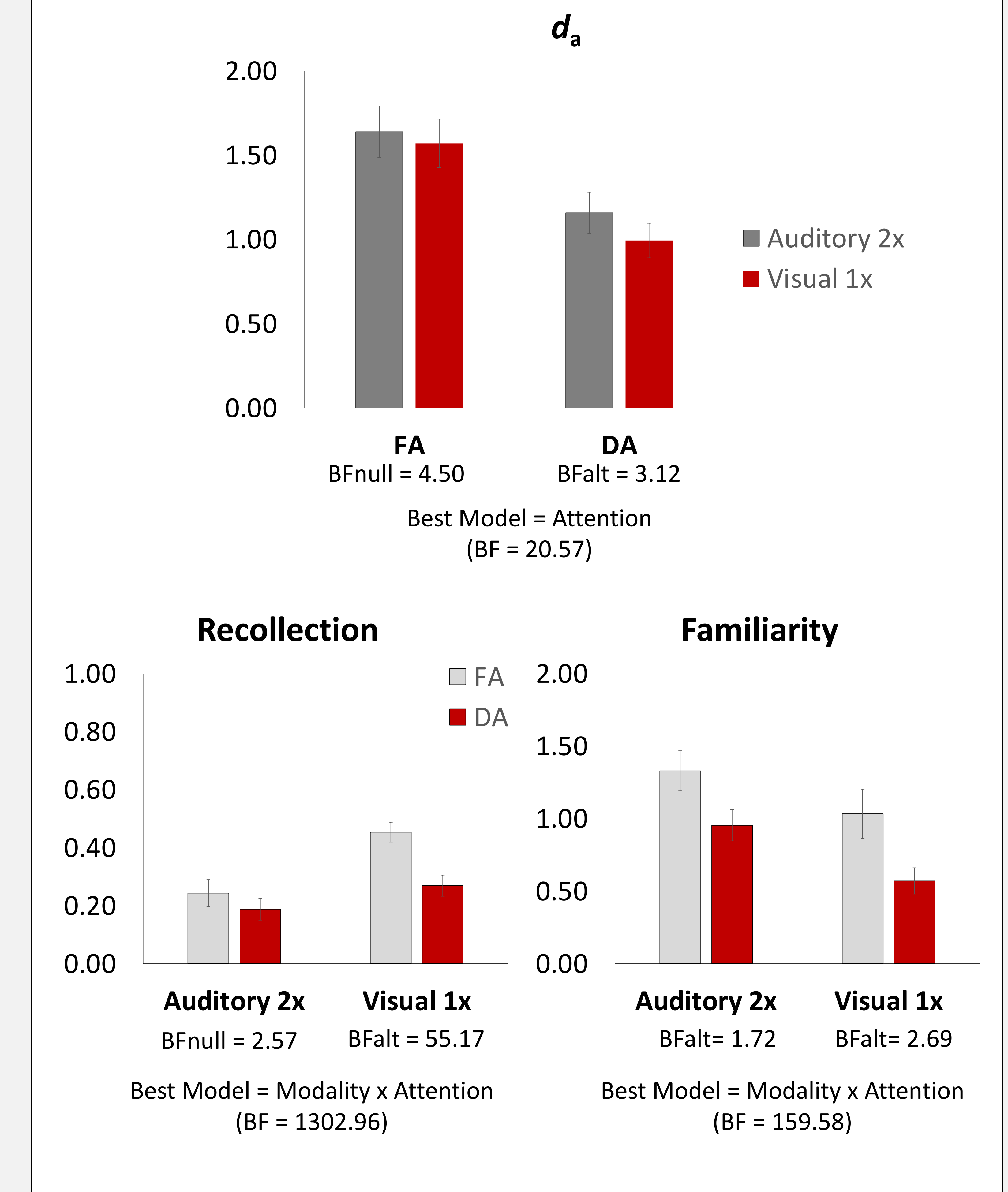
Exp 2: Attempted to bolster auditory recognition to the level visual recognition by repeating audio stimuli during study.



Experiment 1



Experiment 2



Discussion

Visual recognition performance was reduced in the full attention condition in Experiment 1 and auditory recognition performance was enhanced in Experiment 2, thus we successfully equated overall recognition performance in differing ways. Despite equated performance, we still found visual recollection to be uniquely sensitive to reduced attention. This finding suggests that the superior visual recognition performance in our former studies was not the primary cause of the selective decrement in visual recollection. Rather it suggests that attention may operate differently during encoding in the two modalities.

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Amir Kassim, Rehman, R., & Price, J. M. (2018). Effects of modality and repetition in a continuous recognition memory task: Repetition has no effect on auditory recognition memory. *Acta Psychologica*, 185, 72–80.

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