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## STUDY SYNOPSIS

## Title: How accurate are people's long-term memories of emotionally arousing events?

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## **Co-applicant: Prof. Diana Kornbrot**

### AIMS

In order to study the accuracy and vividness of personal, autobiographical memories, we asked young and old people to recall how they first heard the news of tragic public events (either September 11, or the death of Princess Diana) or a relatively unimportant personal event, not winning a small prize.

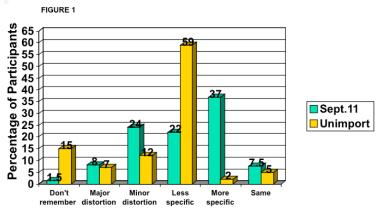
#### **Research Questions**

(1) If memory for an event is vivid and contains lots of detail, will that memory also necessarily be accurate? Previous research has shown that sometimes people are extremely confident about the accuracy of some memories even though objective evidence shows that those memories are completely wrong.

(2) Are there age effects in the accuracy of personal memories? Previous laboratory research with nonpersonal materials has shown age effects with older people recalling fewer words, digits and pictures than young people. However, it is not clear whether such age effects exist also for personal memories.

### **MAIN FINDINGS**

- □ The accuracy of memories of September 11 dropped reliably over a two-year period (from September 2001 to August 2003). However, major distortions in memories were observed in only 9% of cases.
- Even when the person's memory in 2003 described a completely different situation than the one recalled immediately after September 11, it was NOT about an event that had never happened. Instead, people appeared to remember another occasion in which they heard of September 11 again later on the same or next day.
- Memories of unimportant personal news were forgotten at much faster rate and in a qualitatively different way from those of September 11. Up to 37% of memories of September 11 became *more* specific after the delay of 2 years. By contrast, memories of not receiving a small prize became *less* specific after a delay of just 1 year (see Figure 1).
- Importantly, the older people were just as accurate as younger people at recalling both important and unimportant personal events.



Type of memory response after a delay

# CONCLUSIONS

Memory is a constructive process. It may become more rather than less detailed over time. Inaccuracies may be as vivid and detailed as true recall, and incorporate true events from different times. However, personal memories, particularly for dramatic events, are resistant to forgetting over periods of more than a year. Encouragingly, older people have just as good memories as younger people for such personally relevant events. These "real life' findings are importantly different, and suggest better memory, than the findings from earlier studies based on personally irrelevant material, such as arbitrary lists of words in a laboratory setting.

## PUBLICATIONS:

Kvavilashvili, L., Mirani, J., Schlagman, S., Erskine, J., & Kornbrot, D.E. (2010). Effects of age on the phenomenology and consistency of flashbulb memories of September 11 and a staged control event. *Psychology and Aging*, *25*, 391-404.

Kvavilashvili, L., Mirani, J., Schlagman, S., Foley, K. & Kornbrot, D.E. (2009). Consistency of flashbulb memories of September 11 over long delays: Implications for consolidation and wrong time slice hypotheses. *Journal of Memory and Language*, *61*, 556-572.