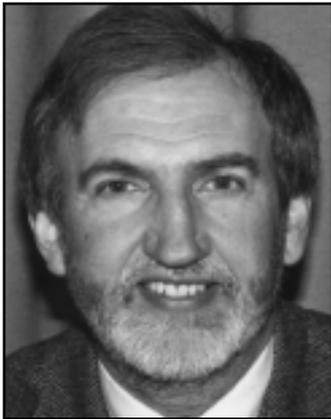


# Intrusive memories, depression and PTSD



**Chris Brewin**  
discusses cutting  
edge research on  
intrusive  
autobiographical  
memory — and how it  
could lead to better  
treatment  
of depression.

**C**LIENTS' memories for their own history and personal experiences — what cognitive psychologists refer to as autobiographical memory — have never ceased to be a source of fascination to clinical psychologists. This is true whether we are engaged in taking a history, identifying the first occurrence of a symptom, or assessing the background factors and current situations that contribute to making sense of the superficially inexplicable.

Historically, psychologists have identified the root of some problems as lying in not being able to remember a bad experience and of other, more common problems, as lying in not being able to forget one. The curse of perpetual reminiscence is a cardinal feature of post-traumatic stress disorder (PTSD), in which sufferers attempt to avoid but cannot prevent vivid, emotionally arousing images repeatedly intruding into their waking or sleeping minds. New research points to the fact that intrusive memories of this kind are important in depression too, suggesting that treatment strategies developed for PTSD may significantly add to the effectiveness of the standard cognitive-behavioural approach to depression. Thus, in addition to techniques such as challenging automatic thoughts and underlying assumptions, therapists may wish to modify specific autobiographical memories.

Some years ago, psychologists studying depression noted that this condition was associated with a memory bias. This involved either better memory for negative events — whether personal experiences or experimental stimuli — or, more usually, it involved poorer memory for positive events or stimuli. For example, compared to a non-depressed person, a depressed person might retrieve a memory of an autobiographical event more rapidly to a cue word like 'lonely' but more slowly to a word like 'successful'. These findings led to influential theories of depression which suggested that the onset of depression facilitates access to memories of bad events which, once activated, themselves exacerbate depressed mood. This in turn leads to a longer and more severe episode of depression (Teasdale, 1988). Similarly, the relative inaccessibil-

ity of good memories makes it harder to combat hopelessness about the future. Thus, the more negative experiences and the fewer positive experiences stored in long-term memory, the worse depression was likely to be.

## Autobiographical memory problems

Recently it has become clear that memory bias for autobiographical events may only apply to recent events, and not to memory for remote experiences such as childhood upbringing (Brewin *et al.*, 1993). Other autobiographical memory problems have been identified such as 'overgeneral memory' (Williams, 1992). This refers to the tendency for the depressed, when asked to retrieve memories of a specific event that occurred at a particular time and place, to retrieve more generic personal memories referring to repeated experiences or whole periods in their lives.

For example, when asked for a memory corresponding to the word 'lonely', they might respond 'when my parents went out every Saturday night and left me on my own' instead of 'one Saturday night when the babysitter was ill and I was left all on my own'.

Despite this theoretical interest in autobiographical memory, the cognitive treatment of depression focuses almost exclusively on the modification of intrusive negative thoughts such as 'I am bad' or 'the future is hopeless'. However, the importance of investigating intrusive memories too has been suggested by new studies that have looked at the phenomenology of depression directly, rather than indirectly via experimental tasks.

The first study was carried out by Willem Kuyken, who asked depressed clients reporting childhood abuse whether they had noticed memories of these experiences coming into their minds during the previous week (Kuyken & Brewin, 1994). The great majority reported that they had indeed noticed such intrusive memories, and their scores on the Impact of Event Scale (IES), a measure of the extent of the intrusion and attempted avoidance of memories, were similar to people diag-

nosed as suffering from PTSD. Interestingly, people reporting more severe abuse also reported more intrusion and struggles to avoid the memories.

Later studies have confirmed that most depressed clients experience highly specific intrusive memories that commonly concern illness and death in the family, episodes of personal illness or assaults, and relationship problems including separations and rows (Brewin *et al.*, 1996; Reynolds & Brewin, 1997).

## Stringent test of the hypothesis

The early studies left many questions unanswered. For example, how certain is it that these memories are a product of depression and not of exposure to stress? A stringent test of the hypothesis that depression leads to an increase in the accessibility of specific autobiographical memories would involve comparing depressed and non-depressed samples — who had both been exposed to similar types and degree of stress — so that the effects on memory of current environmental circumstances were matched as closely as possible. It would also be necessary to ask the depressed group whether the onset of depression was associated with the start or with an exacerbation of intrusive memories, to guard against the possibility that they had always had high levels of such memories, even before they became depressed.

Brewin *et al.* (in press) therefore interviewed depressed and non-depressed cancer patients, matched on age, sex, type of cancer and stage of illness. A cancer diagnosis is well known to be associated with depression and, since cancer treatment is complicated, demanding and time-consuming, it provides many opportunities for cueing recall of autobiographical memories. The depressed cancer patients reported significantly more intrusive memories than the non-depressed patients, and the memories were more likely to have begun or got worse with the onset of depression.

Intrusive memories also appear to be related to more traditional aspects of depressive cognition. Kuyken and Brewin (1995) found that depressive 'overgeneral memory', as described by Williams, was related to a reported history of childhood sexual abuse, and to patients making more efforts to avoid memories of the abuse entering consciousness. Likewise, Brewin *et al.*'s (in press) study of cancer patients found that reported attempts to avoid intrusive memories of a variety of negative life events were significantly associated with greater overgeneral memory.

In addition, Kuyken and Brewin (1996) examined the relation between

intrusive autobiographical memories of childhood abuse and other aspects of depressive cognition, such as self-esteem, attributional style and coping style. Whereas a reported history of abuse showed few associations with these cognitions, individuals reporting more intrusive memories of abuse had lower self-esteem, a more negative attributional style, and a coping style involving more avoidance.

These findings suggest the interesting possibility that many aspects of depressive cognition reflect the fact that the individual cannot help recalling negative episodes from the past. Rather than current life events activating generalized schemas that consist of negative information about the self (e.g. 'I am worthless'), as proposed in Beck's cognitive theory of depression (Beck *et al.*, 1979), they may instead have the effect of activating specific autobiographical memories.

Recent research by social and clinical psychologists tells us that information about the self is stored both in the form of beliefs about our personality traits and in the form of specific autobiographical memories, and that cueing people with traits they think they ought to possess tends to trigger the retrieval of related childhood memories (Strauman, 1992). The enhanced accessibility of the information contained in these specific memories may then have a direct impact on how positively individuals feel about themselves, or on how optimistic they are about the future. Alternatively, attempts to avoid recalling certain unwanted experiences may have more general effects on the efficiency of memory functioning.

## Accessibility of negative memory

According to information-processing theories of depression, the greater accessibility of negative memories should lead to more severe and prolonged depression. Brewin *et al.* (1998) examined the ability of measures of intrusive autobiographical memory, taken at the beginning of their study, to predict the six-month course of anxiety or depression in their sample of depressed cancer patients. Simply knowing whether or not each patient had experienced spontaneous intrusive memories was a predictor of anxiety at follow-up, but not of depression. The IES score reflecting attempted avoidance of each patient's most prominent intrusive memory at baseline also predicted anxiety at follow-up, but not depression. These effects were still present when initial differences in symptom levels were controlled for statistically.

A recently completed study by Brewin *et al.* (1997) has investigated sim-

ilar processes in 62 depressed psychiatric patients. Once again patients were interviewed about life events and intrusive memories, and were then followed up six months later. The results indicated that the presence of a high frequency intrusive memory was significantly predictive of later depression, and that this effect was still present when initial differences in symptom levels were taken into account.

The study also confirmed cross-sectional data reported by Spenceley and Jerrom (1997), suggesting that as depressed patients recover their memories intrude less, but they have to keep on expending a high level of effort to prevent them breaking through into consciousness.

So far we have good evidence that intrusive memories are common and have an important role to play in depression. How different are they to the intrusive memories of PTSD patients? Comparisons we have conducted between matched samples of patients with the two disorders (Reynolds & Brewin, 1997) suggest that PTSD patients are somewhat more likely to have intrusive memories and the memories tend to be somewhat more prominent and more frequent.

When intrusive memories are present, however, there seem to be few obvious differences. Both the depressed and PTSD groups are likely to experience very vivid, highly distressing memories that on average occur several times a week and last between several minutes and one hour. The majority of the memories are accompanied by physical sensations and the feeling of reliving the event. One of the few ways in which they differ is that PTSD patients are more likely to report feeling helpless and to have a dissociative experience such as feeling they were leaving their body or seeing themselves as an object in their memory.

The findings from this programme of research suggest that the study of involuntary, intrusive autobiographical memories is potentially of great importance for understanding at least two major psychiatric disorders, depression and PTSD. It appears that defensive processes involving the blocking out of bad experiences may be more important in depression than has hitherto been thought to be the case by cognitive-behaviour therapists. In particular, the effort to avoid retrieving specific memories may have the paradoxical effect of increasing their accessibility, as appears to be the case for unwanted thoughts (Wegner, 1994). In view of the evidence that intrusion and attempted avoidance of specific autobiographical memories appear to predict outcome, there would seem to be considerable scope for addressing these memories directly as part of the psychological treatment of depression.

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## References

- Beck, A.T., Rush, A.J., Shaw, B.F. & Emery, G. (1979). *Cognitive Therapy of Depression*. New York: Wiley.
- Brewin, C.R., Andrews, B. & Gotlib, I.H. (1993). Psychopathology and early experience: A reappraisal of retrospective reports. *Psychological Bulletin*, **113**, 82-98.
- Brewin, C.R., Hunter, E., Carroll, F. & Tata, P. (1996). Intrusive memories in depression. *Psychological Medicine*, **26**, 1271-1276.
- Brewin, C.R., Reynolds, M. & Tata, P. (1997). Memory processes and the course of depression. Manuscript submitted for publication.
- Brewin, C.R., Watson, M., McCarthy, S., Hyman, P. & Dayson, D. (1998). Memory processes and the course of psychopathology in cancer patients. *Psychological Medicine*, **28**, 219-224.
- Brewin, C.R., Watson, M., McCarthy, S., Hyman, P. & Dayson, D. (in press). Intrusive memories and depression in cancer patients. *Behaviour Research and Therapy*.
- Kuyken, W. & Brewin, C.R. (1994). Intrusive memories of childhood abuse during depressive episodes. *Behaviour Research and Therapy*, **32**, 525-528.
- Kuyken, W. & Brewin, C.R. (1995). Autobiographical memory functioning in depression and reports of early abuse. *Journal of Abnormal Psychology*, **104**, 585-591.
- Kuyken, W. & Brewin, C.R. (1996). The relation of early abuse to cognition and coping in depression. Manuscript submitted for publication.
- Reynolds, M. & Brewin, C.R. (1997). A comparison of intrusive autobiographical memories in depression and post-traumatic stress disorder. Manuscript submitted for publication.
- Spenceley, A. & Jerrom, W. (1997). Intrusive traumatic childhood memories in depression: A comparison between depressed, recovered, and never depressed women. *Behavioural and Cognitive Psychotherapy*, **25**, 309-318.
- Strauman, T.J. (1992). Self-guides, autobiographical memory, and anxiety and dysphoria: Toward a cognitive model of vulnerability to emotional distress. *Journal of Abnormal Psychology*, **101**, 87-95.
- Teasdale, J.D. (1988). Cognitive vulnerability to persistent depression. *Cognition and Emotion*, **2**, 247-274.
- Wegner, D.M. (1994). Ironic processes of mental control. *Psychological Review*, **101**, 34-52.
- Williams, J.M.G. (1992). Autobiographical memory and emotional disorders. In S.A. Christianson (Ed.), *Handbook of Emotion and Memory*, pp.451-477. Hillsdale, NJ: Lawrence Erlbaum.

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