

# Negative memory bias in depressed and healthy participants



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Many theories exist considering depression, for example, Newman and Hirt (1983) argue psychoanalytic theory suggest the loss of someone close, or loss of self-esteem during childhood can end up as suppressed or inhibited feeling that is turned on the self. Should a second event of loss happen, the memories of the past loss, bring out repressed feelings of guilt and sadness. This can result in turning anger on yourself and experiencing low self esteem, depression, and potentially suicide.

Learning theory suggests identity reinforcement schedules as the cause of depression. Lewinsohn et al. (1980) suggest that people become depressed because they find limited positive rewards in their life. Coyne (1976) cited in Worchel and Shebilske (1986) suggests depressed people fuel hostility and anxiety in those around them. Hammen and Peters (1977) suggests more woman evidence depressed symptoms than men as it is less negatively reinforced. Males find other approaches to deal with stress and anxiety. People learn to behave in depressed ways due to reinforcement schedules.

Cognitive theory as proposed by Beck (1983) formulated that people learn to behave in a depressed fashion and feel depressed because of their reinforcement schedules- negative views lead to depression. These negative views construct a cognitive triad which involves negative thoughts about self, the world and the future and combined with illogical interpretations of events leads to depression. It is suggested depressive-prone people tend to over-generalize from failures and focus on their negative characteristics.

According to Rehm and Naus (1990) cognitive processes and mechanisms are key components and problems associated with depression . They

believed that depression itself is a materialization of cognitive processing. Therefore the theories and ideas given from theorists as an explanation all have a firm basis in cognitive processes.

## **Depression, implicit memory, and self: A revised memory model of emotion**

Memory bias for negative information in those suffering from depression has been studied extensively including Bradley et al (1995, 1996) and Watkins et al (1996). In a study conducted by Tarsia et al (2003) they test participants suffering from depression, anxiety with a control group to determine biases, for primed or unprimed words. They found that depressed patients recalled more depression -relevant, than neutral words suggesting that they had a, mood congruent and content specificity bias; more depression over anxiety words were also recalled (Bradley et al, 1995).

## **Implicit and explicit memory biases in mixed anxiety-depression**

Hertel and Hardin (1990) suggest that the reason and explanation why depressed individuals are found to recall more negative or depression-related stimuli (Bradley et al, 1995)xxxxxxx ? is due to difficulties in using strategies. In a series of memory tests, in which mid way through, depressed individuals were given specific strategies to use, they showed no difference in explicit memory task in comparison to those without depression (Hertel and Hardin, 1990). In a similar study Danion et al, (1991) tested hospitalised depressed patients with matched controls and concluded that depression disrupts an effortful memory process, in particular it was stated that this was the method of elaborating on information to be recalled. However as found <https://assignbuster.com/negative-memory-bias-in-depressed-and-healthy-participants/>

by Hertel and Hardin (1990) when such processing is not needed i. e. in implicit memory tasks, there was no difference between depressed and control subjects. These findings have been replicated by many other studies such as Williams et al (1997).

Elliot and Greene, (1992) examined the effect of depression on implicit and explicit memory using words as the stimuli. The study found results following on from other work in that depressed patients showed deficits in explicit memory tasks, however contrary to other literature they also found deficits in implicit tasks. However, this early study shows flaws in the method, specifically in explicit contamination therefore preventing the original reading of the results. (Jacoby et al, 1997).

Current literature and theories on this topic, suggest the implications of mood congruent memory bias in depression. This idea is mostly concerned with implicit memory. There has been some slight confusion between studies about findings for implicit biases, the same has been found for mood congruent memory biases. Barry et al (2004) reviewed studies looking into a processing view of implicit memory, in it was found that when processing needs were of retrieval and encoding were matched, depression containing mood congruent memory biases were found whereas when not matched, none were found. Bower, (1981, 1987) created studies and literature regarding mood congruent memory however did not study depressive patients. Nonetheless his findings are relevant as they showed mood congruent recall; in that positive mood participants recalled positive memories and vice versa for negative mood participants. This has been described as state dependency memory, which Blaney (1986) defined as <https://assignbuster.com/negative-memory-bias-in-depressed-and-healthy-participants/>

that which someone remembers in a particular mood, is influenced by what was learned by the person previously in that mood.

Other inferences regarding memory bias and deficits in depression have been shown as over-general memories by depressive individuals. Hence, over-general encoding processes are through short term capacity linked with insufficiencies in long term memory of depressed patients in comparison to non-depressed persons. This includes mostly recalling negative memories from the past (Hartlage et al, 1993; Williams et al, 1997). Williams et al (1997) posited a device to explain the patterns in depression of explicit memory; that early experiences cause the inability to control memory search processes, which gives an explanation as to why depression patients show such negative memory biases because of a deficit in memory search processes.

Elliot and Greene (1992) found depressed persons displayed mood congruent memory bias for negative stimuli, in this case, words for both explicit memory task and for the implicit task. Specifically, in a word stems task to test implicit memory depressed patients in comparison with controls were more likely to use negative words (Ruiz-Caballero and Gozalez, 1997).

Beck (1967, 1987) in contrast suggested that depression was related to a schema-based explanation, whereby someone's schemas act as filters for personal experience. Therefore depressive schemas are apparent in a depressed person and their experiences are thought of in a way consistent with the schema. Riskind's (1989) proposed a cognitive priming explanation, which suggests that due to mood creating events directly priming memory

that even if a person feels no sadness, experiencing failure can prime negative emotions and therefore negative memories.

Following on from Beck and others with the idea of schema explanations Teasdale et al. (1998) suggested a schematic model of affect particularly in depression which states that cognitive subsystems explain mood biases in memory. They suggested that those with depression undergo schematic changes of self worth which interacts with current emotions, perception processes and most importantly memory processes. Hence a depressed person's information i. e. memory, processing is reliant on both emotional and cognitive subsystems, which altogether makes up the self schematic model of themselves.

Rehm & Naus ( ) created a model of memory processing which covered many aspect of cognition and memory. One assumption of their model suggested that attentional resources were assigned to depressive schemas, which then biases the interpretations of experiences for the depressed person.

More recently, similar findings to that of Hertel and Hardin (1990) regarding strategic deficits were shown by Barry et al. (2006) who suggested an associative network model which puts emphasis upon nodes in the memory network that are activated during an experience, which affects how the information will be remembered. Depressed individuals are suggested to lack strategic processing, therefore Barry et al's (2006) explanation concerns an encoding deficit hypothesis . E. S. Barry et al. / Clinical Psychology Review 26 (2006) 719-745

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Another theory regarding depression and memory bias is the model of schematic encoding processes, this model aids in understanding the effects of depression on memory and vice versa, due to their biasing effect on deciphering incoming experiences or events. This model Hartlage et al, (1993) suggests that attentive processes are diverted to thought related to depression in the short term memory, which when combined with the known lower cognitive capacity of depression sufferers produce interference with the encoding process and therefore memory biases.

Barry et al, (2006) stated that in depressed individuals self-schemas are mostly negative, therefore the negative schemas and negative thoughts, combined with higher importance of social approval and doing well in tasks, the result is a further narrow cognitive capacity - suggesting only allowance for negative information store, therefore causing a negative recall bias.

Furthermore Barry et al (2006) proposes that the negative view of a person, self-feed into the working self; this along with negative schema biasing the processing of recent experience consistent with their interpretation culminates in the negative encoding bias in depressed individuals. As with all memory, cues are required for much of remembering. This is not different in those with depression, however negative self-schemas direct the cues used to retrieve information. Hence cues may contain depression-related biases and therefore the resulting retrieved information becomes an autobiographical memory construction .

Previously Watkins (2002) performed a study in which he stated that as someone with depression ponders over unpleasant or negative information,

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they are actually performing mood congruent conceptual elaboration. This in essence is making the information more available to implicit and explicit retrieval, but the elaboration serves to increase retrieval of information even for relevant material .

## **Depression, implicit memory, and self: A revised memory model of emotion**

Several theorists such as Lewinsohn et al, (1985) and Strack et al,(1985) suggest that self focused attention has an effect on depression related characteristics . Pyszczynski et al, (1989) researched the idea that negative memory bias found amongst depressed individuals is mediated by excess levels of self- focused attention, and can be lowered by taking the focus of depressed people away from themselves.

Consistent with previous studies regarding self -schemata being more negative, studies of word recall in laboratory settings showed that negative bias in depressed participants is only shown under conditions which activate the subjects self schemata. Kriiper and Derry (1982) found that in adjective judgements tasks depressed subjects showed bias recall of depression related words only when they had previously judged the words on how self descriptive they were. In support, findings from Bradley and Mathews (1983) replicated these findings a year later.

Pyszczynski and Greenberg ( ) presented a theory of self-regulatory preservation which integrates the roles of cognitive and motivational processes in depression and that depression comes from an inability to exit self regulatory cycles after losing a central source of self -worth. Therefore



the person focuses primarily on themselves which produces affective, cognitive and behavioural consequences commonly seen in depression, for example negative affect. Studies from Ingram et al (1987) and Smith & Greenberg (1981) have shown that depressed individuals do typically partake in higher levels of self-focus in comparison to non-depressed people. This led to Pyszczynski et al, (1987) to look into distracting depressed individuals from focussing on themselves which in turn showed a decrease in life pessimism in the participants with depression.

These findings replicate Lewinsohn et al, (1985) in terms of self focussing being an explanation for negative memory biases and that reducing self focus reduced the memory bias. Furthermore in agreement with Becks cognitive theories of depression, the idea of eradicating a depressed person self schema, which guides the negative self referent information, would not only reduce the personal negativity in the future but a more importantly it would reduce the negative nature of the information they recall, perhaps reducing negative memory biases.

## **Depression, Self-Focused Attention, and the Negative Memory Bias**

Butler and Beck (1995) reviewed cognitive therapies for depression, which had its roots in Becks earlier work (1967). Therapy is seen as an active, structured, problem focussed approach which uses the idea that depression, is maintained by negatively biased information processing. The therapy is to help the depressed patient through structured and monitored experiences, recording negative thoughts in order to ultimately identify, modify and evaluate assumptions and dysfunctional beliefs . Change in cognition

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obviously has a knock-on affect to negative memory biases, as unlike other methods mentioned to reduce bias this treatment has to eradicate the negative memories instead of the recall biases. Dobson (1989) performed over 30 clinical trials which showed efficacy of cognitive therapy on depressed patients. (Butler, A. C. & Beck, A. T. (1995). Cognitive therapy for depression. *The Clinical Psychologist*, 48(3), 3-5)

## **Cognitive Therapy for Depression**

In conclusion, the main body of evidence bases its theories and content around the cognitive theory of depression. The main hypotheses to consider are firstly the self schemata model which not only gives the explanation as to how negative memory bias occurs, through self schemas which interfere with the encoding process of information which later has a negative effect on the retrieval of events. However, also provides a means to reduce the negativity bias with certain methods of distraction from self focus. The second supposition to take into account is the idea of mood congruent memory bias which suggest that the mood in which memory is processed will affect its retrieval and in the case of a person with depression with mostly negative affect the information more often than not is processed and encoded in that manner. Therefore those people in a negative mood will show bias to negative information and recall those more often than those in a more positive mood.

Rehm and Naus (1990) memory model of emotion was instrumental towards using cognitive research in depression. This model amongst others mostly present in this literature has moved and shaped the progression of cognition into the clinical world and aided understanding of such previously isolated

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domains, such as depression and memory, even as far as assisting in treatment and understanding of development of such phenomena.

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