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INTRUSIVE MEMORIES, COPING AND OUTCOME IN DEPRESSION: TOWARDS A TRAUMATIC PROCESSING MODEL?

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INTRUSIVE MEMORIES, COPING AND OUTCOME IN DEPRESSION: TOWARDS A TRAUMATIC PROCESSING MODEL?

by

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Abstract

Intrusive memories, coping and outcome in depression: Towards a traumatic processing model?

Julie Parker

Recent studies (e.g. Kuyken & Brewin, 1994a) have noted the presence of high levels of disturbing intrusive memories in depressed women. Intrusive memories are best known as a post-traumatic symptom and have received considerable attention from researchers in this field. The presence of a post-traumatic symptom in depression indicates that trauma models might be useful in refining our understanding and treatment of depression. Predictions based on theories of post-traumatic processing were tested in relation to the intrusive memories of a sample of 26 depressed women. The women showed a pattern of intrusive memory experiences which indicate that their memories are likely to be traumatic in nature. The equal availability of childhood and adulthood memories to depressed women contrasts the pattern observed in the 12 control participants, and in other non-clinical samples (e.g. Berntsen, 1996), and is interpreted as lending support to theoretical models of depression which emphasise the importance of childhood experiences to adult depression.

The coping strategies deployed to deal with negative intrusive memories were assessed in both groups. The clinical group showed greater use of avoidant coping than controls, in line with predictions derived from the literature regarding coping and depression. The predictive power of coping style for outcome of depression and intrusion was tested by following up 20 of the 26 depressed participants, approximately four months after initial assessment. The data indicate that the use of approach coping, specifically of Positive Reappraisal, in relation to intrusive memories was significantly predictive of better outcome of depression. This finding is interpreted in the context of psychodynamic models of depression. The data also indicate that the use of avoidant coping, specifically of Cognitive Avoidance, is significantly predictive of the maintenance of disturbing intrusions. This finding is interpreted in the context of traumatic processing models.

Finally, predictions based on the conceptualisation of dissociation as an avoidant coping mechanism, used to keep traumatic affects and experiences out of consciousness, were tested. Dissociation did not show the pattern of associations predicted, but rather seemed to be more closely allied with passive resignation than active avoidance. The pattern of results obtained in this study are interpreted as lending support to the conceptualisation of depression as a trauma-related disorder, and also as lending support to theoretical models which assign great importance to childhood experiences in the aetiology of adult disorder. Potential implications of the study for clinical practice are discussed, and suggestions made for future research.

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Author's Declaration

At no time during the registration for the degree of Doctor of Clinical Psychology has the author been registered for any other University award.

The contents of this bound volume are identical to the volume submitted for examination in temporary binding except for the amendments requested at the examination.

This study was conducted while the author was a Trainee Clinical psychologist in the South West Region based in various health trusts and the research was conducted in collaboration with Frenchay Healthcare Trust, United Bristol Healthcare Trust and Weston Area Healthcare Trust.

Signed.....

Date.....14.7.97.....

Chapter 1: Introduction

1 A review of the research and theoretical literature relating to depression, intrusive memories, coping and outcome

This review will examine the wide variation in the observed phenomenology of depression. This variation indicates that a more productive approach to research into depression may be to isolate and study specific symptoms rather than the disorder as a whole. In this study the symptom that has been selected is intrusive memories (IMs). This is a symptom more commonly associated with post-traumatic stress disorder (PTSD), and therefore a review of relevant PTSD literature will also be presented. The parallels between the two disorders will be highlighted, and the role of IMs will be discussed. The research relating to coping and outcome will be examined and the area of current research will be identified. In order to animate the theory and research findings a case study follows which is referred to again at the end of the introduction in section 1.8.1 and at the end of the discussion in section 4.6.1.

1.1 A Case Study

Helen is a twenty-one year-old trainee in a health-care profession. She is the oldest of two children. Her parents separated when she was approximately eleven years old, following a prolonged deterioration in their relationship. Since then Helen has only seen her father twice. She describes a childhood environment in which feelings were not openly discussed within the family, and does not feel that her relationship with her parents was very supportive. Helen's first episode of clinical depression started shortly before her twenty-first birthday. She first noticed that something was wrong in January of 1996 when she lost her appetite and became less sociable. In the six months prior to the onset of her depressive symptoms Helen had moved away from her home, left a valued job, begun her professional training and started a relationship with her first boyfriend.

In March her symptoms began to worsen; she recalls feeling that the world was a threatening place and wishing to hide from it, feeling worthless, being very self-critical and having suicidal thoughts. She also felt that there was no future and was worried that she would not recover from her depression. In addition to these symptoms she began to be troubled by intrusive memories of extra-familial childhood sexual abuse, which occurred when she was approximately five years old. Helen had never told anyone of the abuse. She experienced nightmares which centred on themes related to the abuse such as; guilt, fear of loss of control and of rejection. In April, she contacted a sexual abuse counselling service for help. Helen had always had memories of the abusive episode, but had successfully avoided thinking about it until the onset of her depression. Despite this successful management strategy, she feels that the abuse had a significant impact on her life, especially in her teens; making her less sociable, concerned with avoiding attention from boys and worried about being in situations which she felt unable to control. She still feels threatened by men now, and reports feeling vulnerable in their company. Helen began a relationship with her first boyfriend slightly before her depressive symptoms became evident. During the early part of this relationship she suffered regular flashbacks to the abuse, these have now lessened in frequency, although they still occur occasionally.

Helen was prescribed anti-depressants by her GP in April, and in July, at the end of her course of weekly counselling sessions her depression began to lift. Helen felt that she had worked through some of her feelings regarding the abuse, and she was feeling considerably less guilty. This improvement lasted until she returned to college in September, when her depressive symptoms returned quickly and more severely than before. Since this time she has been under psychiatric supervision. Eventually she had to take time out of her training course, and she returned to stay with her mother for a short while. Her mood has improved

since this time, and she is now less troubled by negative intrusive memories, although on her bad days she notices that they are more frequent and reports that they lower her mood. Helen feels that her experience of depression has changed her as a person; giving her a greater understanding of herself, and of her effect on other people and making her more able to talk to people about her feelings. She also feels that it has deepened her emotional reactions, as now she experiences both positive and negative emotions more intensely.

1.2 Factors related to onset, course and chronicity of depression

Clinical depression is a disabling condition which is characterised by a person's negative thoughts about her/himself, the world and the future. It is the most common psychiatric disorder, with approximately 10-20% of the general population likely to be affected at some point in their life (Boyd & Weissman, 1981). Its prevalence has led to a great deal of research and the body of literature relating to depression is now enormous. However, much of this research has been carried out on very different populations; including college students, mildly symptomatic community residents and clinically depressed individuals who have presented for treatment. The comparison of such studies assumes that the experience of mild depressive symptoms, such as those caused by stressful life events, are part of a continuum which at one end countenances normal reactions to stress and disappointment, and at the other the clinical experience of major depression. This assumption may well be unsafe. Clinical depression involves a significant impairment of an individual's functioning. Studies which report findings from non-diagnosed subjects who have elevated levels of depressive symptoms, as measured by self-report questionnaires, provide very little information regarding functioning (Gotlib & Hammen, 1992). Unless such depressive symptoms persist and adversely affect the person's life, they cannot be considered comparable to the clinical

experience of major unipolar depression. Hence, this review will be limited, unless otherwise stated, only to studies relating to individuals diagnosed with major clinical depression.

1.2.1 Aetiology/onset

Much of the research effort has been directed towards establishing the aetiology of depression. As one might expect with such a prevalent disorder no one cause has been isolated. Depression is currently viewed as a multicausal problem, with genetic, developmental and life stressor factors all implicated in increasing an individual's vulnerability to depression (e.g. Hirschfield & Cross, 1982). The role of genetic factors is implied by clear evidence of increased incidence of depression in the relatives of depressed individuals (see Goldin & Gershon, 1988, for a review). Also, concordance rates for depression are higher for identical twins than for fraternal twins (Blehar et al., 1988). These findings indicate that genetic transmission may play a role in increasing vulnerability to depression, but they are not definitive proof of such a mechanism, as they are also compatible with transmission via experience of the same family environment.

There is clear research evidence that adverse experiences in childhood, such as the loss of a parent, parental indifference, family violence, family alcoholism and sexual abuse are related to increased risk of developing depression in adulthood (Brown et al., 1994; Brown & Moran, 1994; Kessler & Magee, 1993; Winokur & Coryell, 1992). Research indicates that the most important risk factor is lack of parental care in childhood (Mackinnon, Henderson & Andrews, 1993). As such data are usually obtained using self-report formats the question arises of whether the perceived childhood adversity is a product rather than a cause of depression. The evidence for this proposition is discussed in section 1.4.

Vulnerability to depression is also related to factors in adulthood; experiencing adverse events, often characterised by loss, and having high numbers of life stressors increase risk (e.g. Swann et al., 1990). Onset is associated with experience of adverse life events in the last 6 months, lack of intimate relationships and social support, unemployment and having young children (e.g. Brown & Harris, 1978; McNaughton, et al., 1992). Longitudinal research has shown that depression also develops following accidents and other traumatic experiences (e.g. Malt, 1988; North et al., 1989). The co-occurrence of a number of such factors may have a multiplicative rather than an additive effect in increasing vulnerability to depression and poor mental health generally (Vinokur & Ryn, 1993). Some authors note that, as a common reaction to traumatic life events is to attempt to avoid recollections and discussion of the events, that the established effects of the stress-psychopathology link may well be an *underestimate of the true relationship* (Brom & Witztum, 1992; Horowitz, 1986).

The relationship between stressful events and depression has been found to be mediated by coping (Billings, Cronkite & Moos, 1983; Coyne, Aldwin & Lazarus, 1981; Folkman & Lazarus, 1986; Swindle, Cronkite & Moos, 1989). It seems that vulnerability to depression is increased by a tendency to use emotion-focused and avoidant coping strategies in every day life (Barker, Pistrang, Shapiro & Shaw, 1990; McNaughton, et al., 1992). Such strategies are concerned with the experience and control of emotions elicited by difficulties, rather than dealing directly with the problem which has arisen. The use of such strategies is more common in women, and has been advanced as partially explaining the very marked gender differences in the incidence of depression (Nolen-Hoeksema, 1987). The incidence in women is almost twice that in men (Paykel, 1991). Perceived availability of social support also seems to mediate the relationship between stress and depression (Sherbourne & Stewart, 1991); with the perceived availability of such support seeming to be protective for depression

The wide and complex range of factors which affect vulnerability to depression may account for the fairly common view that depression, as currently diagnosed, is actually a mixed heterogeneous group of disorders, with different aetiologies, courses and outcomes (e.g. Cassano et al., 1989; Clayton et al., 1992; Winokur & Coryell, 1992). For example, depressed individuals who have a familial history of alcohol abuse show more concurrent anxiety and somatic symptoms, are more likely to attempt suicide, experience more negative life events and take longer to recover from their depression than depressed individuals who do not have a family history of alcoholism.

1.2.2 Course/outcome

Research regarding the typical duration of depressive episodes is not conclusive. Clayton (1984) reviewed research on typical duration and concluded that most depressions last 10-11 months from onset. Keller et al., (1982) found that 64% of help-seeking patients recovered within 6 months, and in a community sample Lewisohn et al., (1986) found that 40% of major or minor depressions lasted less than 3 months. Studies which follow depressed individuals from entry into treatment, usually report quicker recovery times than those which consider time from the onset of depression.

The severity of symptoms experienced in a depressive episode is related to a number of factors. Younger age at the onset of the episode predicts more severe depression (e.g. Klein et al., 1988; Hammen et al., 1992), and increases the probability that the depression will take a chronic, relapsing course. More severe depression is associated with poorer outcome, however much of the variation in outcome still remains to be explained (Lyness et al., 1993). The experience of life stress and lack of social support, especially lack of a confiding relationship, are related to increased symptom severity and poorer outcome (Billings &

Moos, 1984; Hammen et al., 1992; Sherbourne & Hays, 1990). The use of avoidant and emotion-focused coping strategies are related to both symptom severity and poor outcome (Billings & Moos, 1984; Kuyken & Brewin, 1994). By contrast active coping has been found to be an important predictor of good clinical outcome (Sherbourne, Hays & Wells, 1995). It is likely that all of these factors are inter-related, as individuals with early onset may have been exposed to more adverse developmental conditions, which prevented them from acquiring adaptive coping skills, which renders them vulnerable to developing depression. Depression greatly impairs the sufferer's functioning, which will render her/him less able to deal with further stressful experiences. Thus depression can become a self-perpetuating problem, this may explain the finding that by far the best predictor of depression is previous depression (e.g. Hammen et al., 1992).

1.2.3 Chronicity/relapse

The likelihood of relapse following an index episode increases with the number of previous episodes (Keller et al., 1983). A study with a non-clinical sample showed that younger people were more likely to relapse into major depressive symptoms (Coryell, Endicott & Keller, 1991). The experience of life stress and lack of social support also increase vulnerability to relapse (Hammen et al., 1989; Swindle, Cronkite & Moos, 1989). In a review Angst (1988) concluded that, following an index episode, approximately 10-25% of people became chronically depressed (i.e. symptomatic for at least 2 years without remission). Recovery or remission seems to be least likely in more severe depression (e.g. Akiskal, 1982; Wells et al., 1992). Two studies have found that over a fifteen year period only one-fifth of patients recover and remain continuously well, following an episode of depression, with a further fifth either committing suicide or remaining incapacitated throughout (Lee & Murray, 1988; Kiloh, et al., 1988). Factors related to chronicity are experience of childhood adversity

(parental indifference, family violence and sexual abuse), current adult interpersonal difficulties and lack of positive events during the course of the episode (Brown & Moran, 1994).

In summary, depression as currently diagnosed, is a very prevalent disorder which seems to be related to both distal and proximal adverse experiences. It has been hypothesised that early traumatic experiences play both a direct role in increasing vulnerability to depression, and also an indirect one, by preventing the acquisition of adaptive skills which will promote good adult functioning (e.g. Brown & Moran, 1994). This lack of adaptive coping strategies may be the stable risk factor which is necessary to explain a disorder which often takes a chronic and relapsing course. As depression may actually represent a heterogeneous group of disorders, with different aetiologies, courses and outcomes, it seems logical that greater emphasis should be placed on the specific features/symptoms of an individual's depression, in order to further knowledge and to target therapeutic interventions more effectively.

1.3 Models/Theories of depression

A wide range of theoretical explanations have been offered to account for depression, a selection of accounts covering the various views will now be reviewed.

1.3.1 Psychoanalytic models

Psychoanalytic formulations of depression (Freud, 1917; Klein, 1957, 1975) conceptualise depression as resulting from the non-expression of anger and destructive feelings. Such feelings are therefore diverted to the ego leading to a lowering of self-esteem through the attacks of the superego. The concept of anger-inhibition is still present in more recent theories (e.g. Arieti & Bemporad, 1980). These theories are essentially intrapsychic and exclude the role of life events in the explanation of onset, course and outcome of depression.

As both proximal and distal adverse life events predict adult experience of clinical depression, this is, at best, an inadequate explanation of the observed phenomena.

1.3.2 "Thwarted need" models

Bowlby (1969, 1973, 1980) turned to the experience of attachment relationships as underlying mental health. Attachment behaviour is of evolutionary significance, as the maintenance of proximity to others lessens threat to the individual; thus we come into the world highly programmed to desire, make and maintain attachment bonds. The affective nature of these relationships serves the purpose of maintaining proximity; with threat to an attachment leading to anxiety and loss to depression. Attachment in early life is most important as this is the stage at which we are most vulnerable. Unstable attachment at this stage will lead to nervous clinging by the child, and hence will limit its opportunities for exploration and acquiring skills. Obviously this will have implications in later life on competence to manage novel and stressful situations. Gilbert (1989) found that the presence of attachment figures to whom a child is *securely* attached exerts psychobiological effects. Thus attachment quality can affect the internal biological environment of the developing child, this may be a physical mechanism mediating vulnerability to future psychological disturbance.

Attachment theory also posits that early experience of care-receiving leads to the development of attitudes and beliefs about the self, such as acceptability and lovability, and about the availability and supportiveness of others. These internal working models (a concept which is quite similar to cognitive "schemata") are carried forward and affect subsequent relational style. The maintenance of attachment bonds is seen as crucial to mental health throughout life. An individual who received inadequate care in early life will be at greater

risk of forming inappropriate (i.e. unsupportive or even directly abusive) relationships and hence, suffering loss or harm. Bowlby also believed that such individuals would be less able to adjust to these losses than people who had received adequate care in early life. Bowlby (1980) described the process relating to loss of an attachment figure/relationship; it begins with a phase of protest and anger which if it does not succeed in restoring the loss, is followed by a phase of despair, which has been compared to depression. During this period there is an oscillation between conscious pre-occupation with the loss and the defensive exclusion of related thoughts and reminders.

In a similar theoretical vein Kohut (1971) places great emphasis on the need for self-esteem. Self-esteem is created through "mirroring" of the child as approved and accepted by the parent. This allows the child internalise a representation of itself as good and of relationships as safe and satisfying. People will be more able to cope with difficult experiences if they have internalised such positive representations form past experience. Wolf (1988) writes of a "mirror hunger" which occurs in people who try to counteract their experience of the self as worthless by seeking approval from others. Depression can result from failure to obtain enough approval. This concept of over-dependence on others for reinforcement is one of the most common elements in theories of depression. (Birtchnell, 1988). Another element in this formulation is the concept of "idealising" needs; these relate to the experience of being cared for by someone stronger and more able. This experience leads to an internalised sense of safety which can be used to soothe the self under stress. Thus, the emphasis of attachment theory and self-psychology in explaining depression is on unmet need, rather than intrapsychic processes.

1.3.3 Trauma models

McKenzie & Wright (1996) propose that adult depression (and indeed, all adult psychological disorder) results from experience of trauma in early childhood. Their theory is related to attachment theory in that the trauma on which they focus is the experience of the infant of being separated from the care-giver which, as they state, for "150 million years of patterning of the brain, this has meant death to the mammalian infant" (p.xi). They believe that such separation need only be perceived as threatened by the infant to exert pathogenic effects. They have studied the birth of the next sibling as an instance of observable traumata from childhood (as the birth of a new baby often results in the infant's actual separation from the mother, and even if such separation is avoided, the experience is extremely stressful to the infant as it implies separation through diluting the mother's attention and also elicits fear of being superseded). Their research indicates that the existence of a closely-spaced sibling is very highly correlated with a range of psychological disorders in adulthood. Additionally, emotional separation caused by distress in the mother in relation to major life events, or by maternal mental illness, are proposed as having effects of a similar magnitude to actual separation. Such experiences are conceptualised as being as much a life or death experience for the infant as being in combat is for the adult soldier. Indeed van der Kolk (1988) draws a "parallel between the protest and despair phases of an infant's response to parental separation and the hyperarousal and numbing states found in PTSD".

McKenzie and Wright (1996) propose the "two-trauma mechanism" as mediating the relationship between early traumatic experiences and later mental health problems. They believe, and provide supportive examples from their large clinical sample, that an eliciting trauma has to occur in adulthood to "re-awaken" the earlier traumatic experience. They theorise that this awakening takes the form of a reversion to the use of

developmentally-earlier areas of the brain. Indeed, they see the neurological abnormalities (both structural and activity-related) discovered in the various disorders (e.g. the relative lack of activity in the pre-frontal cortex in schizophrenia, Schneck, 1986) as being *the result rather than the cause of the disorders* i.e. these abnormalities are conceptualised as being disuse atrophy rather than being pathogenic. The re-awakening of the earlier trauma and related brain-sites occurs because the current adversity which the individual is facing shares the characteristic of actual or implied separation from a "most important other". Once such a re-awakening has occurred it then becomes much easier for the individual to re-access the trauma-related brain sites and subsequent less intense traumata will cause a similar reaction (i.e. the individual becomes prone to relapse in the presence of further stress).

1.3.4 Evolutionary models

Gilbert (1992) also places the phenomenon of depression within an evolutionary context. Although he emphasises the role of "ranking" within a social hierarchy. Depression is associated with unfavourable changes in one's relative social place or (having the perception of) occupying a low social place. An important concept in this formulation is "involuntary, subordinate self-appraisal/perception" (Gilbert, 1992, p.149) which is an experience of lack of social power i.e. the experience of one's life being dominated by others and of being defeated. Gilbert argues that the propensity for social comparison was evolutionarily "selected-in" to reduce the necessity for overt aggression within a species (thereby increasing the survival rate of its members). Also he argues we are programmed to want to relate to high status individuals (i.e. we have "up-hierarchy motivation"). The experience of having up-hierarchy behaviour fail, results in feeling defeated, and the inhibition of a variety of behaviours especially those concerned with reproduction and exploration (which might be

interpreted by dominant individuals as a challenge). The parallels with depression are evident.

Gilbert states that defeat can be internal, in the sense of a gradual recognition that one is not achieving one's aspirations, and that perceptions of social failure are likely to be more easily elicited in individuals who have experienced adverse developmental conditions such as being labelled or treated as inferior or subordinate by parents or siblings. Gilbert hypothesises that depression may have evolved as an internal motivational state which serves to reduce aspiration level and to inhibit aggression; thereby reducing intraspecies conflict. He links the common depressive experiences of shame, social anxiety and lack of assertiveness to adverse experiences within the social ranking system. He also highlights problems that depressives can have in successfully managing anger, and links this to their experiences of being subordinate and therefore having difficulties in the expression of anger. Gilbert acknowledges his formulations can "give only crude approximations to underlying mechanisms" (p. 185) in depression but should be considered as identifying an approach yet to be developed.

1.3.5 Behavioural models

Ferster (1973, 1974) takes a functional analysis approach to depression. The passivity of the depressed person in the face of aversive events is seen as being negatively reinforced. It functions to avoid aversive interactions and thereby also inhibits new learning about ability to cope. The reduction in the frequency of positive behaviour is seen as self-perpetuating; with a reduction in the frequency of behaviour leading to a reduction in the frequency of reinforcement. Within this formulation depression is seen as a maladaptive response to a change in level of reinforcer availability. A "change of reinforcer level" might elsewhere be

referred to as a life-event, such as the loss of a job. The depression-prone person is seen as having a low resistance to the extinction of existing behaviour, and a relative inability to produce new, reinforcible behaviours. As noted in previously-presented models, a skill deficit is again central to vulnerability to depression.

1.3.6 Cognitive models

The best-known theorist in this tradition is Beck (1976; Beck et al., 1979). The basis of Beck's theory is that negative distorted thinking patterns underlie depressed behaviours and symptomatology. These cognitive errors underpin irrational schemata which are used to gather, process and label experiences (Karasu, 1990). The cognitive errors such as selective attention to negative features of events, and personalisation, considering oneself the cause, distort experience in the most negative way possible. This leads to negative expectations of the self, the world and the future. Some theorists have emphasised the role of a particular aspect of cognitive operation, such as attributional style, in causing depression (Abramson, Seligman & Teasdale, 1978). These attributions relate to whether the perceived cause of a negative event is internal or external to the person. Whether this causative factor/characteristic is likely to be enduring (stable or unstable) and finally whether it is likely to affect many outcomes (global or specific). A style which is characterised by internal, stable and global attributions for negative events is most likely to be depressogenic. In common with some of the psychodynamic formulations the depressive cognitive schemata are built up in the course of interactions with the environment and operate automatically organising the individual's memory and information-processing without his/her conscious awareness.

The original Beckian theory has been criticised on the grounds that it employs the terminology of cognitive psychology without reference to the findings of the experimental

research in the field (Ross, 1991). There is now quite a body of research literature which indicates that the simple concepts employed in the original cognitive theory of depression are an inadequate explanation of the relationship between cognition and emotion (see Teasdale, 1993, for an overview). An example of these difficulties is that, when successful, other types of psychological therapy, and indeed drug treatments, produce significant reductions in negative, depressive thinking indicating that rather than being causative, negative thinking is possibly a product of depression (Collins et al., 1990; Simons, Garfield & Murphy, 1984). Also, the dysfunctional assumptions which depressives are meant to possess, are not demonstrable outside of a depressive episode (Teasdale, 1988), indicating that they too are probably mood-dependent, rather than enduring characteristics of vulnerable individuals.

Both the early and more recent cognitive models of depression (Beck, 1972; Gotlib & Hammen, 1992) do acknowledge that significant life events play a role in the triggering of depressive episodes. In the Beck model they are thought to reactivate dysfunctional schemata, created by past (often childhood) negative experiences. Several more recent theorists (Brewin, 1989; Teasdale, 1988; Ingram, 1984) have extended this idea to suggest that depressed people also actually access memories of previous traumatic experiences, and that such memories may maintain episodes of depression by further lowering mood and perpetuating the activation of depressive schemata.

1.3.7 A theoretical synthesis

The various theories are rarely in direct conflict with each other, it would seem rather that they attempt to explain different aspects of a complex phenomenon. All of the more recent theories emphasise the importance of stressful (especially childhood) experiences in creating vulnerability to depression. The psychodynamic, evolutionary and childhood experiences

formulations generally address themselves to ultimate aetiology; how a person is initially rendered vulnerable and what types of experience might trigger an episode. Cognitive theories seem to explain how vulnerability is organised and acts mentally; with biases in attention, information-processing and in memory accessibility. [For a more detailed discussion of the memory effects of depression see section 1.4.] Behavioural theories address the way that events in the environment, and the individual's action upon the environment feed into the other systems. Themes that emerge are that vulnerability to depression is created by over-dependence on reinforcement outside the self, the aftermath of traumatic/stressful experiences (which include information-processing and memory biases) and skills deficits. All of which adversely affect the individual's ability to cope with and adjust to stressful life events.

1.4 Memory and depression

Any study which relates to memory phenomena in depressed persons must consider the issue of whether the nature and content of the memories reported is an artefact of the depression itself. Beck 's theory of depression as noted above views a negatively distorted perception of reality as the cause of depression. It is logical to assume that such negative distortions might also operate on their memories of personal experiences, thus biasing their report of autobiographical memories, and exaggerating their previous adverse experiences. There is also research evidence indicating the operation of selective memory processes in depression. A number of early studies demonstrated mood-congruity effects; that depressed persons show preferential recall for negatively-valenced material such as word lists and self-descriptors (e.g. Lloyd & Lishman, 1975; McDowall, 1984). However, the evidence regarding the effects of mood-congruence on recall of autobiographical memories is less conclusive. Some authors (e.g. Dalgliesh & Watts, 1990; Teasdale & Dent, 1987) have found that depressed people

show more frequent recall of unpleasant rather than positive personal memories. However, Bachar et al. (1987) found that reminiscing depressed patients did not produce significantly different numbers of positive memories to normal controls. They even found that depressives tended to recall *more positive* dream contents than controls. Brewin, Andrews and Gotlib (1993) conducted a detailed review of the research literature in this area, and concluded that there was *no conclusive evidence of any consistent effect* on recall of negative personal memories during depression. They also stated that there was little reason to link psychiatric status with unreliable or less valid recall of personal experiences, as there was no consistent evidence for deficits in short or long-term recall. Significantly, the laboratory findings of the effects of depression on recall of impersonal information have been found to disappear when mood becomes normal (e.g. Dobson & Shaw, 1987). This effect has not, however, been demonstrated in relation to autobiographical memories. Gerlsma et al. (1994) found that there were negligible differences in reports of parental rearing behaviour between periods of clinical anxiety or depression, and periods when mood had improved significantly.

A more robust finding in relation to memory and depression is that autobiographical memories of depressed people are more generalised (Brittlebank et al., 1993; Kuyken & Dalgliesh, 1995). Williams (1994) explains this phenomenon as resulting from a truncated search through memory hierarchies. He hypothesises that depressed persons are less able to access specific experiences because their searches through these hierarchies are truncated too early. Williams identifies this tendency as being a natural stage in early cognitive development, and hypothesises that depressed persons persist in using this early developmental mode in order to control affect, by avoiding recall of specific upsetting experiences. This hypothesis is supported by the observation of the same memory bias in PTSD sufferers (see McNally et al., 1994), although theorists in this field have explained the

phenomenon in terms of the emotional effects of trauma affecting the quality and detail of the original memory traces (Foa et al., 1989, 1992; Brewin, Dalgliesh & Joseph, 1996). The increased incidence of over-general autobiographical memories has been found to persist even when depression remits (Williams & Dritschel, 1988). Over-generality has been found to be associated with poor problem-solving (Evans et al., 1992). This is a possible indication of an aspect of the cognitive organisation of ongoing vulnerability to depression; as the relative unavailability of specific personal experience means that "ever-depressed" persons would be less able to apply prior learning in solving current life problems than "never-depressed" persons i.e. they may have an impaired ability to learn from experience.

1.5 Intrusive Memories: a post-traumatic phenomenon

Intrusive memories are well-known as a feature of post-traumatic syndromes, and indeed are "often considered the hallmark symptoms of post-traumatic stress disorder" (Ehlers & Steil, 1995 p. 218). They have received much research attention within the PTSD literature. The relevant aspects of this literature will now be reviewed. Post-traumatic stress disorder (PTSD) is characterised by three groups of symptoms; i) repeated reliving of the trauma through intrusive memories and dreams; ii) avoidance of cues which remind the sufferer of the original trauma (these cues can be external e.g. the place where the experience occurred, or internal e.g. memories of the event); and iii) autonomic hyper-arousal including an enhanced startle reaction. Depression with suicidal ideation and dissociative phenomena, such as feeling numb or detached from one's life or surroundings are also common in PTSD (McFarlane, 1991). Dissociation has been conceptualised as a means of avoiding affects and memories associated with traumatic events (Putnam, 1989). PTSD symptoms can arise following exposure to a range of threatening events; including combat, rape, accidents and natural and man-made disasters, although research indicates that it is not the only disorder

which arises following exposure to trauma, and that depression also commonly occurs (Malt, 1988; North et al., 1989). Briere (1992) has also suggested that the adult sequelae of child abuse can result in a syndrome which shares many characteristics with other post-traumatic reactions.

1.5.1 Predictors of emergence, severity and chronicity in PTSD

There is some controversy over whether more intense trauma leads to more severe PTSD reactions. Foy et al. (1987) studied Vietnam veterans and found a positive association between level of combat experienced and incidence of PTSD symptoms. In contrast Joseph et al. (1994) found that among survivors of the Herald of Free Enterprise ferry disaster, those who had been fully immersed in the water did not suffer from more severe PTSD reactions than those who had been partially or not immersed. It is generally accepted amongst researchers that aspects of the traumatic experience alone do not adequately predict emergence, severity or chronicity of PTSD (e.g. Foa, Steketee & Rothbaum, 1989; Foa, Zinbarg & Rothbaum, 1992; Joseph, Yule & Williams, 1993).

Researchers have offered evidence for a number of cognitive factors as mediating the relationship between the traumatic experience and development of PTSD (for an overview see Ehlers & Steil, 1995; Brewin, Dalgliesh & Joseph, 1996). These factors include:

i) The individual's *perceptions* of the unpredictability and uncontrollability of the stressor (e.g. Foa, et al., 1992).

ii) The individual's *perception* of the severity of the threat presented (e.g. Foa et al., 1992).

iii) The causal attributions which the individual makes about the event (Joseph et al., 1993).

iv) The effects of the event on the individual's beliefs, especially those linked with their safety and competence (e.g. Foa & Riggs, 1993). This effect can be to shatter previously-held healthy beliefs, or to confirm pre-existing dysfunctional beliefs.

v) The coping strategies deployed by an individual in response to the trauma. Active, problem-focused strategies seem to be linked to better outcome than avoidance or emotion-focused strategies, e.g. distancing or wishful thinking (Solomon, Mikulincer & Avitzur, 1988).

vi) Other variables, such as social support, which are commonly linked to outcome in stressful situations (e.g. Jones & Barlow, 1990), and which may be cognitively mediated. For example, social support may operate by providing conditions for therapeutic confiding or by preventing dissociative detachment.

These factors have also been used to explain aspects of depression, see sections 1.2 and 1.3.

Research indicates that a history of psychological or behavioural problems prior to the stressor is strongly predictive of PTSD symptoms (e.g. Frank & Anderson, 1987). Previous experience of trauma has been shown to be robustly associated with the emergence of PTSD following an index stressor (Breslau et al., 1991). This may indicate that experience of prior trauma is accounting for the association between clinical history and severity of PTSD. Some studies have found a particularly *strong relationship between previous depression or depressive attitudes and the development of PTSD* following exposure to a severe stressor (e.g. Solomon et al., 1988). Hence, it seems that vulnerability to PTSD may, in some way, be linked with vulnerability to depression, possibly via their joint association with past traumatic experiences.

Chronicity of symptoms is highly variable in PTSD, with studies showing symptoms in World War II combat veterans and POWs up to 40 years on (e.g. Hierholzer et al., 1992). There is evidence that responses to human-caused disasters tend to be more chronic than those which occur in relation to natural disasters (Baum, 1987). It is also possible for the

onset of PTSD symptoms to be delayed, often by many years (e.g. McFarlane, 1988). The resolution of symptoms is thought by most theorists to depend on whether "emotional processing" of the trauma is completed (Horowtiz, 1986; Foa, Steketee & Rothbaum, 1989; Brewin et al., 1996); although theorists vary in their approaches to explaining the phenomena of PTSD, and also in their ideas regarding the nature of the processing that takes place.

1.5.2 Models of PTSD

There are two broad categories of theory which attempt to explain the phenomena of PTSD (see Brewin, et al., 1996 for an overview). These are social-cognitive theories (e.g. Horowitz, 1986; Janoff-Bulman, 1985;1992) and information-processing theories (e.g. Foa et al., 1989). Social-cognitive theories emphasise the impact of the trauma on an individual's life and highlight the massive social and cognitive readjustments that often need to be made to integrate the traumatic experience into an individual's pre-existing views of the world. The information-processing approach focuses more on how trauma-related information is represented in the cognitive system, and how it is subsequently processed. Foa et al. (1989, 1992) propose the concept of a *fear network*. This is a structure created in memory by the traumatic event. Activation of the fear network by triggering stimuli (reminders of the trauma) causes information in the network to enter consciousness (the intrusion symptoms). Attempts to avoid and suppress this distressing activation lead to the cluster of avoidance symptoms. Resolution of PTSD symptoms can only occur when the fear network is sufficiently activated and new information incompatible with it can be integrated, for example that the individual can now cope with related situations, or that not all trauma-related stimuli present a real threat.

Of greatest relevance here is the dual representation model (Brewin, et al. 1996) which proposes that cognitive representation of trauma on at least two levels is necessary to explain the observed phenomena. They propose that these two levels are the respective outputs of conscious and non-conscious information-processing. There is consensus among researchers that the two processes are distinguished from each other not only by accessibility to conscious examination but also by the type and speed of information-processing which occurs (see Brewin 1989; Epstein, 1994, for reviews). Non-conscious processing is characterised by extreme rapidity and parallel processing of multiple inputs, which permits more detailed and extensive computations than does conscious processing which is limited by its slowness, serial nature and our inability to hold more than a small amount of information in memory at one time. It has also been proposed that the output of these different forms of processing are stored in different locations or different codes (e.g. Tulving & Schachter, 1990). This finding can be interpreted as support for McKenzie and Wright's (1996) hypothesis that traumatic processing also involves a "flashback" to the use of different developmentally-earlier brain structures.

One set of representations will be the person's conscious experience of the trauma, Brewin (1989) termed this "verbally accessible knowledge/memories" (VAMs). This information can be consciously accessed from the store of autobiographical memories. The information that they contain is likely to be limited and highly selective as anxiety increases attentional selectivity and decreases short-term memory capacity (Eysenck & Keane, 1990). The output of non-conscious processing will be a more extensive set of representations which cannot be deliberately accessed. Brewin (1989) termed this "situationally accessible knowledge/memories" (SAMs), as it may be accessed automatically when the person is in a context whose physical features or meaning is similar to those of the traumatic situation. This

context may be internal, such as consciously thinking about the trauma, or external, such as a similar event on television.

A number of authors (e.g. Jacobs & Nadel, 1985) have found that the hormonal effects of acute trauma may act to diminish neural activity in anatomical structures which serve conscious processing, and enhance activity in structures serving non-conscious perceptual and memory processes, supporting the hypothesis that a great deal of trauma-related information, especially sensory (visual, auditory, olfactory etc.), physiological and motor aspects of the traumatic will be processed non-consciously. These extensive representations allow the original experience to be recreated i.e. as a flashback. The representations can be situationally activated without conscious awareness. The person only becomes aware of the activation when they experience a "symptom" such as emotional arousal, spontaneous intrusive images or a dissociative state. In contrast VAMs can be consciously accessed and will be progressively edited during the post-trauma adjustment phase. As time progresses it is likely that more generic memories will be created that encompass the fact of having experienced the trauma but without the same detail. Hence, VAMs are more mutable than SAMs which tend to retain the original power and intensity of the traumatic experience, and which therefore cause more distress.

Brewin et al. propose that there are three possible outcomes of post-trauma processing; completion/integration, chronic emotional processing and premature inhibition of processing. Completion or integration represents the ideal state in which the memories of the trauma have been fully processed and integrated with the person's other memories and sense of the self in the world. Completion requires sufficient repetition of the incident in memory for the person to accept the reality and consequences of what happened to them without

being overcome by the accompanying emotions. The reduction in negative affect will increase tolerance of the intrusion of SAMs; and each time the intrusion occurs without eliciting intense emotion habituation will occur, further weakening its power to distress the individual and furthering the process of completion. The markers of successful integration in survivors of trauma would be the absence of attentional and memory biases i.e. the trauma stimuli would no longer be preferentially processed as they were of no special significance to the individual. Such integration may not, of course, be fully achievable, but it would be most likely under the following conditions: small discrepancies between trauma information and pre-existing cognitive models (e.g. less intense and frequent stressors, no experience of prior trauma), adequate cognitive development, good social support and an ability to tolerate the intrusion of SAMs into consciousness.

In some cases, perhaps where trauma was severe or repeated, integration may not be possible, and chronic emotional processing (CEP) may result. CEP is more likely than integration if the person is prevented from processing memories of the trauma because of i) competing demands, ii) highly aversive emotional reactions to intrusions, iii) lack of social support, iv) inadequate cognitive development, i.e. being too young to appreciate the meaning and circumstances of the event, v) presence of ongoing trauma or threat which continually reactivates trauma memories. If complete processing is not possible the person may become permanently pre-occupied with the consequences of the trauma and with intrusive memories. In this state the features of immediate post-trauma emotional processing, such as heightened arousal, attentional and memory biases are likely to be chronically present. Secondary reactions such as depression, cognitive and behavioural avoidance, or anxiety and panic may develop. Brewin et al. suggest that comorbidity of PTSD with depressive, anxiety or substance abuse symptoms is likely to reflect the effect of CEP. Depression may result from

a resolution of the discrepancies between trauma-related information and previous beliefs which consists of seeing the world and the self in much more negative terms. Chronic depression can also be conceptualised as a possible product of CEP. Wherein the chronic processing of traumatic material causes pre-occupation with negative memories and stimuli, thereby biasing information-processing against positive material and maintaining the depressive mood state.

A final possible outcome of post-trauma processing is premature inhibition of processing (PIP). PIP is conceptualised as the result of sustained efforts to avoid the reactivation of unpleasant SAMs and VAMs. Trauma victims commonly report strategies that they use for avoiding thinking about the trauma and hence escaping the accompanying emotional arousal. Sufficient repetition of these strategies may result in the process becoming automatic. For example, an "avoidance schema" may develop that monitors sensory input for trauma-related stimuli and directs conscious attention away from them. Similarly, the person may develop trauma-related scripts that enable them to incorporate the autobiographical fact of the trauma into their VAMs, and to have limited communications about it, without reactivating SAMs. In this state there will no longer be any active emotional processing, intrusive memories, or deliberate attempts to avoid intrusions, but the SAMs concerning the trauma should still be accessible in the right circumstances. The significance of this type of outcome is that, although the person may appear to have recovered from the effects of the trauma, the unprocessed memories remain vulnerable to reactivation in later life. This may be triggered by the person encountering situations with similar meanings or entering a similar mood state. This idea is therefore a potential explanation for the phenomenon of delayed onset PTSD, and also possibly for depression of a relapsing sub-type. PIP is likely under the following circumstances; large discrepancies between trauma information and prior assumptions,

inadequate cognitive development, poor social support and the ability to prevent the intrusion of SAMs into consciousness, this ability may be linked to the use of dissociative defenses during the trauma, or to a general facility to avoid processing negative information.

1.5.3 The nature of intrusive memories in post-traumatic stress

Observations of the nature of post-traumatic intrusions supports their proposed non-conscious non-semantic nature. Data collected regarding the intrusive recollections of adult survivors of child sexual abuse show that *visual* recollections are the most common form of intrusions. Wenninger and Ehlers (in preparation) found that 97% of their sample reported visual recollections (51% resembling film clips, 46% resembling single pictures), 66% somatosensory sensations, 51% sounds or smells and 26% thoughts. These sensory memories are examples of SAMs. The extreme nature of the trauma studied here may account for the relatively low incidence of VAMs in comparison to SAMs; it might be expected that the relative proportion of the types of memory might be different in relation to a less extreme stressor. This idea is supported by the findings of Steil and Ehlers (in preparation) that in individuals who had experienced road traffic accidents 45% reported thoughts of the trauma, although a considerable number of the participants also reported memories in the other modalities.

1.5.4 The purpose of intrusive memories in adaptation after exposure to trauma

Research demonstrates that immediately following exposure to a traumatic event, such as rape or assault, the majority of victims meet the diagnostic criteria for PTSD (for reviews see Kilpatrick & Resnick, 1993; Rothbaum & Foa, 1993). It seems then, that post-traumatic symptoms, including intrusive memories (IMs), are a sign of normal adaptation to abnormal events. The purpose of such IMs has been conceptualised as being to allow "the organism to

rehearse covertly alternative responses and contemplate the overall unpleasantness of the situation so that avoidance or escape from the life-threatening situation becomes more likely if encountered again" (Eberly, Harkness & Engdahl, 1991, p.367). Brewin et al. (1996) see their function as aiding the process of cognitive readjustment by supplying detailed sensory and physiological information concerning the event, which is then included in the conscious attempt to reconcile the trauma information with pre-existing cognitive models of the world and the self. The possible adaptive role of intrusion symptoms following experience of trauma is supported by Creamer, Burgess and Pattison's (1992) longitudinal study of reactions to a multiple shooting. They found that level of intrusions was positively associated with severity of concurrent symptoms, but negatively associated with severity of symptoms some months later. Persistent high levels of IMs would however indicate a failure of the reconciliation process and would predict poor long-term outcome.

1.5.5 The maintenance of intrusive memories in PTSD

Persistent IMs have indeed been linked to poor long-term outcome (Baum et al., 1993). The fact that, having experienced the same stressor, only a proportion of individuals go on to develop chronic stress reactions raises the issue of personal vulnerability; perceived control and the experience of IMs have been found to be important in mediating this relationship (Baum et al., 1993). It has also been established that using emotion-focused coping in relation to intrusion symptoms is associated with more severe and chronic symptomatology (Morgan, Matthews & Winton, 1995).

Ehlers & Steil (1995) advance a model for the maintenance of IMs in PTSD and by corollary the prevention of the resolution of the disorder. This model assigns a crucial role to the interpretations which an individual places on the traumatic experience, and interpretations of

the aftermath, especially the experience of intrusive recollections. They note that often people do not connect their symptoms with their experience of trauma, leading them to make erroneous assumptions about the posttraumatic symptoms that they are experiencing e.g. intrusive memories are interpreted as a sign of impending breakdown or of brain damage.

1.6 Intrusive memories in depression

IMs are not specific to post-traumatic syndromes. Depressed women have been found to experience high levels of disturbing IMs (Kuyken & Brewin, 1994a). In depression such memories have, however, received comparatively little research attention. It is well-established that depressed individuals have experienced both remote and recent adverse experiences, hence, it is perhaps unsurprising that they should have symptoms of post-traumatic stress. The women in the Kuyken and Brewin (1994a) study had been sexually abused in childhood, and the IMs studied were of this abuse. The measure used to assess intrusion in this study was the Impact of Events Scale (IES; Horowitz, Wilner & Alvarez, 1979); a self-report measure designed to measure stress reactions (the IES assesses levels of intrusion and avoidance of stressor-related material) which is very commonly used in PTSD research. Hence it is possible to compare the level of post-traumatic symptomatology experienced by these depressed women with the levels experienced by participants in PTSD research (see Table 1).

Table 1

Comparison of IES scores of Depressed Women Sexually Abused in Childhood and Survivors of Other Traumatic Events.

Author of Study	Traumatic Event	Mean IES Score	Control Score
Kuyken & Brewin (1994)	Childhood sexual abuse.	38.2 (N=30)	No controls.
Horowitz et al., (1979)	Various. Subjects were selected from a stress clinic.	Male: 35.3 (N=16) Female: 42.1 (N=50)	Male: 6.9 (N=75) Female: 12.7 (N=35)
Solomon et al. (1991)	Male armed combat veterans suffering from delayed PTSD reactions.	36.0 (N=73)	6.8 (N=73) Controls were matched for age and battle experience.
Joseph et al. (1994)	Sinking of the Herald of Free Enterprise: 30 months afterwards.	34.1 (N=70)	No controls.

It can be seen from this data that the intrusion experienced by currently depressed women who have been sexually abused in childhood, is easily comparable to that experienced by individuals who have survived life-threatening events.

It has been indicated by longitudinal research that intrusive cognitions and memories relating to a traumatic event may be the causal link between the traumatic event and the onset of PTSD and other post-disaster disorders (McFarlane, 1992). It has been established that the coping responses which an individual deploys to deal with intrusive memories in PTSD may be a key factor in the maintenance of the syndrome (Ehlers & Steil, 1995). The lack of research attention to IMs in depression is curious because, as Kuyken and Brewin (1994a) note there are strong indications that memory processes and adverse experiences both play important roles in the aetiology and maintenance of depression. Coping with IMs has been identified as being a key factor in the maintenance of PTSD syndromes; it may also be that coping strategies deployed in response to the experience of negative IMs in depression is a

key factor in determining whether the depression is maintained or resolves. It is possible that the use of certain types of coping strategies in the face of negative events, both in the external world and the internal world (e.g. the experience of an unpleasant memory) may be a common vulnerability factor between PTSD and depression.

1.6.1 Intrusive memories in non-clinical populations

IMs also occur in everyday life (Berntsen, 1996), with subjective estimates of their frequency varying between 3 and 20 memories per day. They differ from the memories experienced by clinical populations, in that they are usually positive, however, they do tend to relate to unusual events. Hence it seems that the negative IMs experienced by clinical populations represent the intensification of a normal process. This is consonant with the view that PTSD-type reactions are pathological intensifications of the normal processes which occur in stress reactions (e.g. Schwarz & Prout, 1991). Depression is also often regarded as part of a continuum with normal experience, the factor which is discontinuous in both cases is the effect on functioning. PTSD and depression both have a marked effect on the individual's ability to function, unlike normal experience of stress and sadness.

1.7 Coping and outcome in depression

1.7.1 Definitions and measurement of coping

Coping has been defined as "efforts, both action-oriented and intrapsychic, to manage (that is, master, tolerate, reduce, minimize) environmental and internal demands, and conflicts among them" (Cohen & Lazarus, 1979, cited in Cohen, 1987). Folkman and Lazarus (1984) propose that the type of coping response used in a given situation is dictated by an individual's appraisal of the stressful situation (primary appraisal) and of the resources available to cope with the situation (secondary appraisal). There is little general agreement

regarding the optimal conceptualisation of coping (Rohde et al., 1990), but most authors seem to include both behavioural and cognitive patterns used in the face of difficult and problematic situations, and which mediate their effects. There are a number of ways in which coping can be measured. Interview protocols have been developed (e.g. Folkman & Lazarus, 1986), but most often it has been measured using self-report questionnaires, such as the Ways of Coping Questionnaire (WOCQ; Folkman & Lazarus, 1980). Also there is some variation regarding whether coping is assessed as a dispositional variable, as in the WOCQ or as a specific response to an identified stressor as in the Coping Responses Inventory (CRI; Moos, 1993). The term coping seems to imply unidimensionality, which would mean that any person strong on this single factor would be less affected by stressful events. However if, as suggested by many authors (e.g. Lazarus & Folkman, 1984; Billings & Moos, 1982) coping is multidimensional, the relationship between coping dimensions and stress and disorder would be more complicated; with some dimensions having a strong mediator role and others possibly being irrelevant in a particular association.

This multidimensional concept seems to be borne out by the literature on coping and its relationship to depression (e.g. Billings & Moos, 1984; Coyne, Aldwin & Lazarus, 1981). A number of different classifications of the dimensions of coping have been proposed; these include the problem-focus/emotion-focus dichotomy (Lazarus & Folkman, 1984) and the approach-avoidance split (Roth & Cohen, 1986). These two conceptual frameworks are not mutually exclusive. Approach coping styles generally involve engagement in purposeful attempts to deal with the problem, such as logical analysis, but can also include strategies directed at regulating affective reactions, such as positive reappraisal. Avoidant coping styles are more generally related to emotion-focused strategies such as emotional discharge or cognitive avoidance. Most measures of coping seem to cover very much the same aspects,

but comparison is complicated by whether coping is assessed by report of actual coping in relation to a real stressor, report of likely usage of strategies in relation to an imagined stressor, or by report of general coping style.

1.7.2 Factors affecting selection of coping strategies

The research literature relating to coping has identified some interesting trends. Sex differences in coping have emerged, with emotion-focus coping and avoidant coping both being more common in women (Billings & Moos, 1984; Barker et al., 1990). There are also significant relationships between education and coping. With better-educated individuals being somewhat less likely to rely on avoidance coping; especially cognitive avoidance, acceptance or resignation, and emotional discharge (Billings & Moos, 1981, 1984; Moos, 1993). A variety of extrinsic factors influence the type of coping response an individual produces in a given situation. These factors include the type and severity of the stressor, and the extent to which the individual experienced the stressor as a challenge (Moos & Swindle, 1990). Higher numbers and greater rated-severity of stressors are related to the use of more of both approach and avoidance coping responses (Holahan & Moos, 1987; Moos et al., 1990). Social support can also affect the type of coping employed in response to stressor, depressed patients and normal controls with good social support from family and friends showed more reliance on seeking guidance and support and problem solving and less reliance on emotional discharge (Fondacaro & Moos, 1987; Holahan & Moos, 1987). Members of cohesive and achievement-oriented families were more likely to rely on problem-focused or approach coping responses. In contrast, members of conflict-oriented and controlling families were more likely to rely on avoidance coping (Billings & Moos, 1982). Finally, there is also evidence that financial resources play a role in determining the type of coping used; with

individuals with more financial resources are less likely to use avoidance coping (Holahan & Moos, 1987).

1.7.3 Patterns of association between depression and coping

General trends which emerge from the literature regarding coping and outcome in depression indicate that avoidant coping (e.g. refusing to believe a problem exists, engaging in wishful fantasies) and emotional discharge (e.g. crying, smoking, overeating) are associated with bad outcome (Billings & Moos, 1984; Sherbourne, Hays & Wells, 1995; Swindle, Cronkite & Moos, 1989; Veiel et al., 1992). These responses fall into the broad category of emotion-focused/avoidant coping. Conversely the use of problem-solving (e.g. taking action to deal with the situation, learning new skills, compromising) and active affective regulation (resisting impulses, working through feelings, tolerating ambiguity) are associated with good outcome in depression (Billings & Moos, 1984; Sherbourne et al., 1995; Swindle et al., 1989). These responses fall into the broad category of problem-focused/approach coping. Generally when coping is conceptualised along a broad approach-avoidance split, depressed patients have been found to engage in less approach and more avoidance coping than comparable controls, when the nature and stressfulness of the event are held constant (Roth & Cohen, 1986). More specifically, depressed patients have been found to engage in less planful problem-solving or positive re-appraisal than non-depressed controls (Kuyken & Brewin, 1994b). The data regarding information- and support-seeking did not show a clear relationship with outcome (Billings & Moos, 1984; Swindle, Cronkite & Moos, 1989).

1.7.4 Directionality of the observed relationships

The association of emotional discharge with symptom severity may reflect the level of co-existing depression. It may be that rather than causing bad outcomes, emotional discharge

responses simply reflect the individual's current inability to manage their emotions successfully enough to achieve affect regulation. This hypothesis is supported by the finding that the relationship between stress and coping is mediated by depression severity (Billings & Moos, 1985a; Kuyken & Brewin, 1994b). Kuyken and Brewin (1994b) found that control subjects who had suffered an episode of clinical depression did not differ from never-depressed controls in their coping, which would seem to indicate that there are processes at work within a depressive episode which affect the selection of coping strategies in relation to stressful events. Folkman and Lazarus (1986) adhere to this idea, arguing that persons high in depressive symptoms perceive more threat in stressful situations. Bandura (1977) suggested that appraisals of threat will lead to more avoidance coping. If depressed patients perceive stressful events as more threatening (primary appraisal) and are more uncertain of their ability to cope (secondary appraisal) this may explain the relatively high levels of avoidance coping and low levels of approach coping generally found in the literature.

A large longitudinal study of individuals who had had or were currently experiencing a major depressive episode found that active coping strategies are important predictors of clinical outcome; patients reporting such strategies were more likely to remit within one year (Sherbourne et al., 1995). However, avoidance coping (e.g. wishful thinking, emotional discharge, sleeping more etc.) was related to the development of a new episode of major depression among patients without current major depression at baseline and an increase in symptoms among all patients. Hence, it seems that there may be a reciprocal relationship between depression and coping, with depression predicting the type of coping produced and with coping predicting severity and relapse in depression.

1.7.4 Coping and intrusive memories in depression

Kuyken and Brewin (1994a) found that women who showed more avoidance of intrusion were more severely depressed, it may be that the use of this coping strategy in relation to intrusion is maladaptive, however there was no information regarding the use of other coping strategies in this study. It would be necessary to study the effects of a range of coping strategies in relation to IMs in order to be able to draw any conclusions. Spencely and Jerrom (in preparation) found that remitted depressed women showed lower levels of intrusion than currently depressed women, but similarly high levels of avoidance of trauma-related stimuli. It may be that remitted women are simply more successful at avoidance than the currently depressed women, and that this successful avoidance results in an improvement in their mood. The pattern also, however, fits the configuration of symptoms that would be expected in premature inhibition of traumatic processing. The continued avoidance indicates that traumatic material has not been fully integrated, and therefore this pattern would be predicted to be associated with relapse into disorder. There are treatment implications connected with this issue. If successful avoidance results in remission of depression, then treatments for depressions which are characterised by negative IMs should be directed toward helping the patient to learn to avoid their memories more effectively. If the continuing high levels of avoidance indicate inadequate processing and therefore predict relapse, this would indicate that techniques currently in use in relation to PTSD; such as eye-movement desensitisation, might be more effective long-term treatments for such depressions.

PTSD research has established that use of emotion-focused coping generally is related to more severe overall symptomatology (e.g. Morgan et al., 1995). The use of thought-suppression strategies in particular were found to be predictive of higher levels of symptoms. The authors note, however, that their coping measure may have over-emphasised

the negative aspects of emotion-focus, such as self-blame and self-criticism and under-represented more positive emotion-focused strategies. McFarlane (1991) proposed that there is a reciprocal relationship between intrusive imagery and avoidance behaviour in PTSD, and that the efficacy of the individual's coping responses probably determines whether the disorder is maintained. Maladaptive coping responses may fuel the feedback loop whereas adaptive coping responses may break the cycle. This proposition is supported by the finding that future post-traumatic symptomatology was predicted by use of more emotion-focused coping and less problem-focused coping (Solomon, Mikulincer & Flum, 1988). Hence, there are indications of a possible role of emotion-focused coping, in prolonging or possibly preventing recovery from disorders characterised by negative intrusive memories. The effects of emotion-focused/avoidant coping have been accounted for in terms of their prevention of necessary emotional processing (Foa et al., 1989; Brewin et al., 1994).

1.7.5 Is dissociation a coping strategy?

Dissociation is defined as "a lack of normal integration of thoughts feelings and experience into the stream of consciousness and memory" (Bernstein & Putnam, 1986, p.727). As noted previously it is characteristic of PTSD-type reactions, and it has been conceptualised as a means of avoiding affects and memories associated with traumata, which may have taken place either in childhood or adulthood (Gleaves, 1996; Putnam, 1989). Dissociative processes seem to make painful events less intense by altering perceptions (depersonalisation and derealisation), by " forgetting" (psychogenic amnesia) or by disowning the experiences as belonging to someone else (multiple personality disorder) (Chu & Dill, 1990). Dissociation is regarded as essentially a normal process, being part of a continuum with day-dreaming and automatic functioning, such as driving (Putnam, 1989; Bernstein & Putnam, 1986). It is only

regarded as abnormal or disordered when it becomes disruptive of functioning because it is exceeds adaptive limits of intensity, frequency and context (Putnam, 1989, p.9).

Adult dissociative symptoms are very highly correlated with childhood abuse (Chu & Dill, 1990); in the presence of such severe trauma dissociation has been described as "a creative survival strategy" (Gleaves, 1996, p.42), and thus might be legitimately regarded as a (possibly automatic/nonconscious) coping response. Dissociation might be considered to be an extreme cognitive form of avoidant coping, and to be related to thought-suppression. It is possible that dissociation is an "avoidance schema" as discussed in section 1.5.2 p.23. As avoidant coping has been identified as being associated with poor outcome in depression, and thought-suppression has been identified as being related to more severe symptomatology in PTSD, dissociation might be hypothesised to be related to poor outcome and/or to the maintenance of disorders characterised by IMs.

Dissociation is outside the scope of any currently available coping inventory, and must be measured independently in research. Levels of dissociation have been assessed in variety of clinical populations and in normal control samples using the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986), a self-report measure which quantifies the extent of an individual's dissociative experiences. Table 2 shows the mean DES scores discovered in various populations.

Table 2

A Survey of the DES Means Observed in a Variety of Populations.

Author of Study	Subject Population/Clinical Disorder	Mean DES score
Carlson et al. (cited in Carlson & Putnam, 1993)	General population	7.8 (N=415)
Carlson et al.	Anxiety disorders	10.4 (N=97)
Carlson et al.	Affective disorders	12.7 (N=102)
Coons et al., (1989)	Schizophrenia	17.7 (N=61)
Chu & Dill (1990)	Inpatients abused in childhood	19.9 (N=62)
Carlson et al.	PTSD	30.0 (N=116)
Carlson et al.	Multiple Personality Disorder	42.8 (N=228)

DES score has been found to correlate negatively with IQ in a sample of substance abusers (Dunn et al., 1993), which may indicate that it is a coping mechanism which is employed by individuals who are more limited in their repertoire of responses to stress and trauma, possibly as a result of their adverse developmental environments. A very good overall predictor of DES score is general psychological distress (Dunn et al., 1993).

1.8 A synthesis of the relevant literature

The commonalties between depression and PTSD and the importance of IMs and coping should, hopefully, by now be evident, but to summarise:

Both disorders are associated with previous traumatic experience. There is substantial symptom over-lap and co-morbidity between the two disorders (Davidson & Foa, 1991). McNally (1992) suggested that the re-experiencing symptoms and exaggerated startle response were the distinctive features of PTSD, however it has been established that depressed women also suffer from high levels of disturbing IMs, and anxiety and panic very

often co-occur with depression. Theoretical models of depression emphasise the effects of adverse (especially childhood) experiences in creating vulnerability to depression. This link accounts for the explanatory power of theoretical models of PTSD when applied to phenomena observed in depression. One example is that recovered depressives show comparatively low intrusion, but similar high levels of avoidance of reminders of negative past experiences in relation to currently depressed individuals (Spencely & Jerrom, in preparation). These data fit the pattern of prematurely inhibited traumatic processing, in that active intrusion has reduced but avoidance remains. This raises the question of whether episodes of depression characterised by negative IMs might be periods of *processing of previous traumatic experiences*, which have been triggered by current life stress which shares characteristics with the prior trauma. This type of disorder may actually constitute a sub-type of depression. The fact that there are cognitive factors common to both disorders; such as the experience of IMs, attributional style and the relative inability to retrieve specific autobiographical memories indicates that there are similarities in their mental organisation. IMs have been found to be important predictors of outcome in PTSD (Ehlers & Steil, 1995), and the way in which an individual copes with intrusions has been proposed as accounting for the resolution/maintenance of the disorder (Baum et al., 1993). The general relationship between type of coping used by sufferers and outcome in both disorders is very similar; with emotion-focus/avoidant coping associated with greater symptom severity and poorer long-term outcome. IMs have received much more research attention in PTSD, and their importance in the disorder is now established. IMs may well play a similarly important role in depression.

1.8.1 Case study re-visited

Referring back to our case study it can be seen that Helen felt a lack of warmth and care in her childhood, experienced the break up of her family and was also sexually abused. Hence, her early experiences include a number of the theoretically and empirically identified risk factors for adult depression. The changes and stressors which she experienced in adulthood probably triggered the onset of her depression. The beginning of her first sexual relationship; sharing some contextual characteristics with a previous traumatic experience, seems to have started some traumatic re-processing of her abusive experiences. Traumatic processing is indicated by Helen's disturbing IMs of her abusive experiences. Her recovery from depression was associated with a lessening in the frequency of these traumatic intrusions. However, a relapse into low mood and a resurgence of the IMs occurred following experience of relatively less stress than was required to cause onset of the initial episode. This fits with the idea that once access to previous traumatic information is made, such access then becomes easier (McKenzie & Wright, 1996). The fluctuation of Helen's intrusive symptoms in parallel with her depression can be interpreted as supporting the hypothesis that depressions characterised by disturbing IMs are actually periods of traumatic reprocessing, and that low mood may be a side-effect of or secondary emotional reaction to this processing (Brewin et al., 1996).

1.9 The current research

It is fairly widely-held view that depression, as currently diagnosed, may actually represent a mixed heterogeneous group of disorders (e.g. Winokur & Coryell, 1992). If current diagnostic classifications are not valid and reliable, it makes sense to base research and clinical work on individual symptoms, such as intrusive memories, rather than on

hypothetical disease entities. This is the approach that has been selected in the present research.

1.10 Aims and hypotheses

1.10.1 Aims of the present study

The aim of the present study is to investigate the phenomenon and role of IMs in depression. Assumptions based on the dual representation theory of PTSD and trauma-related theories of depression will be tested; specifically whether depressed women experience higher levels of negative IMs than controls (which would indicate ongoing traumatic processing), whether they experience more IMs of childhood experiences than controls (which would be predicted by the crucial role assigned to childhood experience in a number of theories of depression) and whether they experience more IMs which are perceived as not being triggered (and which are therefore likely to have been situationally-activated without conscious awareness). Associations between intrusive, depressive and dissociative phenomena will be investigated, in order to further knowledge of their interrelationship. A range of coping strategies deployed in relation to IMs will be assessed, and their association with outcome for depression and intrusion will be investigated. As sex differences have been identified between men and women with regard to coping, it was decided in compliance with advice offered by other authors (Kuyken & Brewin, 1994b), to include only women in the present study. Hence, any findings resulting from this study must be replicated with men before any generalisations are made.

1.10.2 Hypotheses

Hypotheses 1-3 involve comparison between the clinical and control groups:

Hypothesis 1:

Depressed participants will experience more traumatic intrusive memories than controls.

Hypothesis 2:

Depressed participants will experience more intrusive memories of events from childhood than controls.

Hypothesis 3:

Depressed participants will make more use of avoidant coping strategies in relation to intrusive memories than controls.

Hypotheses 4-7 involve only depressed participants:

Hypothesis 4:

Depressed participants who use more approach coping styles in relation to intrusive memories will show greater improvement in depression at follow-up, regardless of level of intrusion.

Hypothesis 5:

Depressed participants who make more use of avoidant coping strategies in relation to intrusive memories will have higher levels of intrusion at follow-up.

Hypothesis 6:

Depressed participants experiencing high levels of negative intrusive memories will also show high levels of dissociation, independent of level of depression.

Hypothesis 7:

Depressed participants who show most recovery will have lower levels of intrusion at initial assessment.

Chapter 2: Method

2.1 Design

The primary design used in this study was a repeated measures longitudinal design, with an independent control group. Members of the clinical group were assessed at two time intervals, an average of approximately four months (16 weeks) apart. This time period was chosen as, within the time constraints of the present research, it was likely to allow for clinically significant change to occur. Members of the control group were only assessed once, as the research was not concerned with change in this group. A sub-group of the both the clinical and control groups were asked to complete memory diaries. Only a sub-group of each was requested to do this, as the procedure potentially generates a very large amount of data; the sub-group of participants asked to complete this part of the study were randomly selected. Eleven participants from the clinical group were asked to complete this part of the study, eight of the eleven diaries were returned, eight participants in the control group were requested to complete this part of the study, all eight diaries were returned. Hence, some aspects of the design are cross-sectional; as comparisons will be made both within and between groups with regard to the diary data.

2.2 Measures (for a copy of all questionnaires, and further information regarding their development, reliability and validity see Appendix 2)

<u>The Beck Depression Inventory (BDI; Beck et al., 1979)</u>

The BDI is a 21-item forced-choice, self-report measure of depression severity in previously diagnosed individuals. It is not a diagnostic instrument, but provides information on current levels of symptomatology. There are two sub-scales measuring i) cognitive-affective and ii) somatic-performance symptoms. Reliability and validity have been reported for clinical and non-clinical populations (Beck & Steer, 1987; Hammen, 1980; Lightfoot & Oliver, 1985).

The authors of the BDI have declined to recommend rigid cut-off scores for different degrees of syndromal depression, however, the following guide for use with diagnosed depressives appears in the BDI Manual (Beck & Steer, 1987): 0-9 = normal range/asymptomatic; 10-18 = mild-moderate depression; 19-29 = moderate-severe depression; 30-63 = extremely severe depression.

The Impact of Events Scale (IES; Horowitz, Wilner & Alvarez, 1979)

The IES is a 15-item scale of current subjective distress related to stressful incidents. It is very commonly used to measure stress reactions in PTSD research. It comprises two sub-scales measuring i) intrusive thoughts/images/memories and ii) efforts to avoid intrusions. Participants are required to rate items according to the frequency ("not at all", "rarely", "sometimes", "often") with which they have been experienced in the preceding seven days. A score of 0 is given if an item has not been experienced at all and scores of 1,3, or 5 are given for the three degrees of positive endorsement for frequency. Thus the maximum score on the Intrusion scale is 35, whilst the maximum score on the Avoidance scale is 40. A total score can be calculated by simply adding together the two sub-scale scores. The validity, test-retest reliability, sensitivity to clinical change, and integrity of the two sub-scales has been demonstrated (Horowitz et al., 1979; Joseph et al., 1992; Schwarzwald et al., 1987). On the basis of its established validity and reliability, Kuyken and Brewin (1994) suggest the IES is a suitable measure of distress in relation to any identifiable trauma. In the present study the participants were not asked to restrict their responses to any one event, and hence the information regarding stress response symptoms probably refer to more than one eliciting life event. As depression is related to multiple stressful life events, both in childhood and adulthood, it was deemed appropriate not to limit participants

responses to only one event. The scale has been used in this more general manner previously (Kuyken & Brewin, 1994; Spencely & Jerrom, in preparation).

The Coping Responses Inventory (CRI; Moos, 1993)

The CRI is a self-report measure which assesses coping responses used in relation to an identified recent stressor. It has been developed and refined through a number of versions, and many of these stages involved assessment of its reliability and validity with large samples of depressed patients, as well as with matched normal samples (e.g. Holahan & Moos, 1987). There are two categories of coping responses assessed in this measure; approach and avoidance coping. These categories are comprised of four sub-scales each, making a total of eight sub-scales, which relate to both cognitive and behavioural aspects of approach/avoidance coping. There are six questions relating to frequency of usage of each coping strategy. Possible responses receive the following scores: not at all/not applicable=0, once or twice=1, sometimes=2 and fairly often=3. Hence, the maximum possible score for any one sub-scale is 18. A description of the sub-scales follows:

Approach coping responses:	Description:
1. Logical Analysis (LA):	Cognitive attempts to understand and prepare mentally for a stressor and its consequences.
2. Positive Reappraisal (PR):	Cognitive attempts to construe and restructure a problem in a positive way while still accepting the reality of the situation.
3. Seeking Guidance and Support (SG):	Behavioural attempts to seek information, guidance or support.
4. Problem Solving (PS):	Behavioural attempts to take action to deal directly with the problem.

Avoidance coping responses:	Description:
5. Cognitive Avoidance (CA):	Cognitive attempts to avoid thinking realistically about a problem.
6. Acceptance or Resignation (AR):	Cognitive attempts to react to the problem by accepting it.
7. Seeking Alternative Rewards (SR):	Behavioural attempts to get involved in substitute activities and create new sources of satisfaction.
8. Emotional Discharge (ED):	Behavioural attempts to reduce tension by expressing negative feelings.

The Dissociative Experiences (Bernstein & Putnam, 1986)

This is a 28-item self-report measure which quantifies an individual's dissociative experiences. It requires that the respondent indicate what percentage of the time they have a particular experience. Possible responses range from 0% to 100% rising in 10% increments. An individual's overall score is calculated as a mean of all her responses. The scale has been extensively validated; with assessments made of its concurrent, criterion and discriminant validity (e.g. Bernstein & Putnam, 1986; Carlson et al., 1993; Draijer & Boon, 1993; Frischolz et al., 1991). The authors are very clear (e.g. Bernstein & Putnam, 1986; Carlson & Putnam, 1993) that the DES is *not a diagnostic instrument*, although its discriminant validity does make it an extremely accurate screening measure for identifying individuals whose dissociative symptoms warrant further investigation.

Intrusive Memories Diary

The diary measure used was an adaptation of the procedure used in Berntsen's (1996) study of involuntary memories in a non-clinical sample. Participants in the present study were

asked to record a maximum of 3 memories for 5 days following their meeting with the author. This would result in a maximum of 15 memories being reported by any one participant. The figure of three memories was chosen as Berntsen's research indicates that this is the lowest subjective estimate of the frequency of involuntary memories in non-clinical populations. This then, was likely to represent a fairly low level of task demand, which was felt to be appropriate considering that the population being studied were depressed women, and therefore likely to be experiencing negative memories and also to be suffering from motivational problems.

In addition to this procedural divergence, the questionnaire used to record information about the memories was slightly altered. In the Berntsen study the participants were asked to record some details about the memory immediately it occurred, and later to elaborate these details by completing a more detailed questionnaire. Only the first part of this procedure was used here, both to reduce task demand and in consideration of the likely distressing nature of some of the memories the depressed sample might be reporting. Further elaboration might have been unnecessarily distressing, and so was not requested. This information was collected by supplying all willing participants with a booklet of questionnaires, with one page to be filled in per memory (a sample memory questionnaire is included in Appendix 2). The information required was the *date and approximate time of the memory*, to give an indication of how many memories were reported each day, and to assess the effects of diurnal mood variation on the type of memories reported. Whether the respondent was *under or over 16 years* at the time of the memory; to assess the relative numbers of memories from child/adulthood. Whether the respondent considered the memory to be *positive/negative/neutral*, and whether the memory *lifted/lowered/ did not impact on mood*. Questions were also asked about whether the memory was discernibly *triggered* and what was the *type of trigger* (examples

were given of likely triggers, and space was also provided for the respondents to state what other experiences might have triggered the memory). The addition of questions regarding age at the time of the memory and time of day at which the memory occurred represent an adaptation of the Berntsen procedure, otherwise this questionnaire is identical to the initial data recording completed by her participants immediately that they became aware of having an involuntary memory experience. The same recording format was used with the control group.

Personal Information

Each participant was asked to provide some personal details. These included age, marital status and factors known to be associated with occurrence of or recovery from depression such as level of education, employment status and serious physical health problems. In addition the control group were asked about any experiences of clinical depression, in order to identify any control group members who had ever experienced an episode of major depression.

2.3 Participants

Depressed sample: A sample of 26 depressed women was recruited from a variety of sources; these included psychiatric outpatient clinics, community psychiatric services, outreach services and psychiatric day hospitals. GP and voluntary services were also approached, but no participants were forthcoming from these sources. Potential participants were identified by mental health professionals who asked their permission to be contacted by the author. The inclusion criteria for the study were that the individual had been diagnosed with a unipolar major depressive illness by a consultant psychiatrist. Women over the age of 60 years were not approached, as there is evidence that late onset depression may differ in some aspects of its phenomenology from earlier onset illnesses (e.g. McCullough et al., 1990; Sherbourne &

Stewart, 1991). Women with major physical illnesses were also excluded, as research indicates that concurrent major physical illness may both cause and prevent recovery from depression (see Schulberg, et al. 1987 for a review). A final exclusion criterion was that participants should not have any additional current psychiatric diagnoses, such as drug/alcohol dependence. The above criteria represent an attempt to recruit a relatively "uncomplicated" clinical sample.

An inclusion criterion for the study was that women must score within the depressed range on the BDI; this was taken as an indication that they were *currently depressed*. Scores of 15 or over on the BDI, in conjunction with a diagnosis of a major unipolar depressive illness was taken as confirmation of both the type and current status of the individual's mental health problem. The IES was also administered as an assessment for inclusion. As stated in the Chapter 1, this study is concerned with a possible sub-type of depression which may be characterised by symptoms more commonly associated with PTSD. Hence, the IES was administered to assess whether potential participants were *experiencing intrusive symptomatology*; an intrusion score of zero would exclude a potential participant. One participant was excluded on grounds that she was currently asymptomatic on the BDI, no participants were excluded on the grounds of their IES score. 20 out of the 26 depressed participants completed the follow-up part of the study. It was not possible to contact five of the women and one woman was too busy with wedding plans to be followed-up in the time available.

Control Group:

A control group was recruited of 12 women who had never been treated for a depressive episode. This history was assessed through a questionnaire asking if the women had ever

been treated either by their GP or by a mental health service for depression. The women were recruited from a variety of sources including via a dance class and among secretarial staff at a local hospital.

2.4 Demographic data

Information regarding participants' age, education, marital and parental status was collected as these variables have been identified as being associated with incidence of depression (e.g. Brown & Harris, 1978; Brown & Moran, 1994). The same data were collected from the control group, for the purposes of comparison on these variables. No attempt was made to match clinical and control group members, and hence significant differences might be expected between the groups on some of these important variables.

Summaries of the demographic data for both groups is presented in Table 3:

Table 3

Summary of demographic data for clinical and control participants

	Clinical group	Control group
Age	Mean=35.8	Mean=39.5
Education	Mean=12.9	Mean=14.7
Employment	50% employed	100% employed
Marital status	50% married 27% single 23% divorced	46% married 31% single 15% divorced
Parental status	73% parents	33% parents

2.5 Procedure

Ethical approval for the study was obtained from the committees of Weston Area Health Trust, United Bristol Healthcare Trust and Frenchay Healthcare NHS Trust. Letters confirming this approval are included in Appendix 3.

Potential participants for this study were identified by members of various clinical teams. dependent on the relevant clinician's preference the woman was either approached directly by the author, or permission for the author to make contact was requested by the clinician. After the woman had read the Participant Information sheet (Appendix 2), any questions relating to the study were answered. If consent was given the following procedure was then followed with each participant. Participants completed the questionnaires described below in the presence of the author, who was available to deal with any questions arising during completion of the measures. The measures were presented in the same order to each participant. The two inlcusion/exclusion measures the BDI and the IES were completed first in that order; whilst the participant was completing the second of the two questionnaires the author checked the score on the BDI for clinical group inclusion criterion of BDI>14. The IES score was checked for an IES intrusion score >0. This procedure was undertaken to ensure that participants were not being asked to provide data which would not be of use. One potential clinical participant was excluded on the grounds of current BDI score, no participants were excluded on the basis of their IES score. These inclusion criteria did not apply to the control group, but the questionnaires were administered in the same order for purposes of comparability.

Following completion of the BDI and IES the participants were asked to complete the Coping Responses Inventory (CRI; Moos, 1993). A verbal instruction was given **"Bearing in mind**

the memories which this questionnaire asks about (the author shows the participant the IES which the participant has just completed), please answer these questions (author hands the participant the CRI) about how you cope when you have negative intrusive memories." Three control group members had difficulty in filling in the CRI in relation to their IES responses, as they had not had any negative IMs in the past week. Directions were given that these participants should fill in the CRI bearing in mind a time when they had experienced negative IMs. All control participants were able to do this successfully. Lastly, each participant was asked to fill in the Dissociative Experiences Scale DES; Bernstein & Putnam, 1986). Following completion of the questionnaires, if the participant had been selected to be asked to take part in the diary study they were asked if they would be willing to complete a diary. Eleven currently-depressed participants agreed to complete diaries (eight of which were returned). Similarly, nine control participants agreed to complete diaries, eight of which were returned. If a participant was willing to complete a diary the author went through the instruction sheet for the completion of the diary (also in Appendix 2) with her. All participants were thanked at this stage and given the opportunity to ask any further questions. Clinical group members were reminded that the author would wish to see them again in approximately three months, and asked if they were still willing to be seen. No participants refused permission for follow-up.

2.6 Planned analysis of data

The data derived from the study were analysed using either the SPSS-PC+ or the Excel computer packages.

2.6.1 Testing of data for normality of distribution

The distributions of all of the data obtained in the study were tested for normality. Where there was some concern that the data were not normally distributed, i.e. either the skewness or kurtosis statistics were significant at the 5% level, or approached this level, a conservative position was adopted and non-parametric statistics were used. Comment will not be made separately on this operation for each analysis performed, it can be taken as read that if non-parametric statistics are reported there was concern that the data violated the assumptions of normality inherent in the related parametric test.

2.6.2 Investigation of data for differences between groups

A number of different groups will be used in the analyses reported in chapter 3, some preliminary comparison of these groups was necessary for various reasons discussed below.

Clinical and control groups: No attempt was made in this study to match depressed and control participants. A number of demographic factors have been found to be associated with depression, and hence it was necessary to compare the groups on these characteristics, in order to assess the confidence that could be placed in any other differences discovered. Comparison showed that there were significant differences between the groups with regard to employment (Chi-square=13.31 df=1, $p.<.01$) and parental status (Chi-square=10.98 df=1, $p.<.01$). There were no significant differences with regard to other demographic factors studied; age ($t=-.89$ df=18.23 $p.>.05$), marital status (Chi-square=0.32 df=2, $p.>.05$) and education ($Z=-1.46$, $p.>.05$).

Summary: There are significant differences between the clinical and control groups with regard to employment and parental status. Depressed participants are more likely to be unemployed and to be parents.

Diary and non-diary participants: Only a sub-sample of each group completed the diary measure. For the purposes of assessing the likely generalisability of results obtained, it was necessary to compare these groups with the larger samples, to assess whether they differed from the remainder of the group from which they were drawn. The clinical sub-group did not differ from the remainder of the clinical group with regard to their scores on any of the self-report measures (BDI t=1.55 df=12.01, p.>.05 2-tailed, equal variances not assumed; Avoidance sub-scale of the IES Z=-.29 p.>.05; Intrusion sub-scale of the IES Z=-1.62 p.>.05; total IES score Z=-1.1, p.>.05; DES Z=-.289 p.>.05; CRI-Approach Z=-1.07, p.>.05; CRI-Avoidant Z=-.61, p.>.05). Similarly they did not differ with regard to any of the demographic factors studied (age Z=-1.01, p.>.05; education Z=.83, p.>.05; parental status Chi-square=.75 df=1, p.>.05; employment Chi-square=1.76 df=1, p.>.05; marital status Chi-square=.23 df=2, p.>.05. For the last two Chi-squares more than one expected cell frequency fell below 5, however as the resultant statistics fell far short of significance, it is probably safe to assume that they are non-significant.). The same calculations performed for the control diary sample similarly showed that there were no significant differences between the sub-sample and the remainder of the group either for scores on self-report measures on demographic variables.

Summary: No significant differences have been identified between the diary sub-groups and the remainder of the two groups from which they are drawn. This applies to both scores on self-report measures and to demographic factors.

Depressed participants completing follow-up and those not available: As mentioned earlier only 20 of the 26 original depressed participants were available for follow-up. The follow-up group were compared the participants unavailable for follow-up, to asses if there were any significant differences between them. The two groups did not differ significantly in

their scores on any of the self-report measures (BDI t=.124 df=7.44 p.>.05, equal variances not assumed; Avoidance sub-scale of IES Z=-.09 p.>.05; Intrusion sub-scale of IES Z=-.58 p.>.05; IES total score Z=-.58 p.>.05; DES Z= -.12 p.>.05; CRI-Approach Z=-.21; CRI-Avoidance Z=-.36 p.>.05). Similarly there were no significant differences between the groups with regard to demographic factors (age Z=-.95 P.>.05; education Z=-.7 p.>.05; marital status Chi-square=3.31 df=2 p.>.05; parental status Chi-square=.35 df=1 p.>.05 and employment Chi-square=3.46 df=1 p.>.05. All of the chi-square analyses had more than one expected cell frequency below 5, however none of the statistics approached significance and hence any differences can be assumed to be non-significant.).

Summary: No significant differences were observed between depressed participants completing follow-up and those not available, with regard to demographic and self-report measures.

2.6.2 Testing of hypotheses

On a number of occasions there were concerns that data were not normally distributed see section 2.6.1. Hence, multiple non-parametric tests (most often the Mann-Whitney U test) will be reported in chapter 3, please see notes below. Also, these concerns affect the reporting of t-tests see below. On occasion, for brevity, only the broad approach-avoidance split of the CRI will be reported, see note below.

Note regarding the interpretation of multiple Mann-Whitney U tests: As multiple comparisons will be made the probability of finding significant effects by chance is increased. Effects will be reported as significant if the associated p. value is less than .05, however effects will be conservatively interpreted if their p. value is greater than .01.

Note regarding the reporting of the Mann-Whitney U test: SPSS-PC+ does not calculate a significance level for the U statistic, but instead gives the related Z statistic and its

significance level. The Z statistic corrects for scores receiving the same rank. This means that if Z is not significant, U will not be significant either (Bryman & Cramer, 1990; Diekhoff, 1991). Hence, for all following analyses using the Mann-Whitney the value of Z and not U will be reported.

Note regarding the reporting of t-tests: because of concerns regarding the normality of distributions of some data used in the following analyses, where t-tests are reported the "equal variances not assumed" version is reported.

Note regarding the reporting of the CRI: at some points in Chapter 3 statistics based on the Approach-Avoidance split in the CRI will be reported; the standardisation of this measure was however carried out on the individual sub-scales. Where analysis of the broad categories are reported, analyses of the sub-scales were also carried out, and concurred with the results for the broad categories. The individual statistics will not be reported for brevity.

Hypotheses 1-3 involve comparisons between the two groups of participants to assess any differences present.

Hypotheses 4 and 5 represent attempts to identify coping strategies which, when used in relation to IMs, are significantly associated with outcome in either depression or intrusion. One measure of such an association is linear regression. There are other variables which have been found to have significant relationships with outcomes in depression and it was therefore necessary to test their effects both alone, and in conjunction with such coping variables as showed significant association with outcome. A number of associations were tested before conclusions were drawn about significant relationships between coping with IMs and outcome.

Hypothesis 6 is an investigation of the association between intrusion and dissociation. The distributions of these variables were assessed and an appropriate correlation procedure was selected. The effects of depression on the relationship were assessed using a partial correlation, which partialled depression out of both variables.

Hypothesis 7 two analyses of this hypothesis were made. Again relevant distributions were assessed for normality, and the appropriate test selected. Initial level of intrusion and a measure of weighted change in depression were correlated. A further analysis was carried out by splitting the depressed participants who completed both data collections into groups. Those whose BDI score was one standard deviation below the mean for depressed participants at follow-up were classified as significantly better than the rest of the group, and a test was made for differences between the these groups with regard to their Intrusion scores at the beginning of the study.

Chapter 3: Results

3.1 Analysis of demographic data

Significant differences between the clinical and control groups have been identified (see Section 2.6.2 for further details). Depressed participants are more likely to be unemployed and to be parents. There are no significant differences between the groups in relation to age, marital status and education.

3.1.2 Comparison of the diary sub-samples with other participants

A number of comparisons were carried out to assess the representativeness of each diary sub-group (see section 2.6.2 for further details). The clinical sub-group did not differ from the remainder of the clinical group with regard to their scores on any of the self-report measures. Similarly they did not differ with regard to any of the demographic factors studied. The same calculations performed for the control diary sample similarly showed that there were no significant differences between the sub-sample and the remainder of the group either for scores on self-report measures on demographic variables.

3.2 Analyses of intrusive memories data

Hypothesis 1: Depressed participants will experience more traumatic intrusive memories than controls.

Analyses relating to this hypothesis were made using both data from the Impact of Events Scale (IES) questionnaire and from the memory diaries completed by a sub-sample of each group. Table 4 shows descriptive data for both groups on all questionnaire measures used in the study. The data reported for depressed participants is the initial data set.

3.2.1 Memory diary data

Two procedures were employed in the analysis of the memory data produced by participants completing the diary. The first procedure involved making frequency counts of the various attributes of the raw data, the second procedure involved the use of four independent volunteers who categorised the descriptions of memories provided by participants. These volunteers independently assigned the descriptions to categories of "specific" or "general" memories. The instructions supplied to the raters in order to guide this task are available in Appendix 4. The results of the both types of analyses are reported below.

Table 4

Descriptive Data for all Measures for Clinical and Control Groups

Measure	Clinical group (N=26) Mean scores	Control group (N=12) Mean scores
BDI	**30*** ** (Range 15-47, SD=9.2)	**4** (Range 0-8, SD=2.3)
IES- Intrusion	**23*** ** (Range 11-33, SD=7)	**6** (Range 0-18, SD=5.9)
IES- Avoidance	**22*** ** (Range 0-34, SD=7.9)	**2** (Range 0-10, SD=2.9)
IES total	**45*** ** (Range 12-63, SD=13)	**8** (Range 0-28, SD=8.3)
DES	**26*** ** (Range 3-59, SD=14.5)	**5** (Range 1-11, SD=2.4)
CRI - Approach	**31** (Range 8-52, SD=11.9)	**30** (Range 5-62, SD=19.2)
CRI - Avoidance	**38** ** (Range 22-57, SD=8.8)	**21** (Range 1-49, SD=16.4)

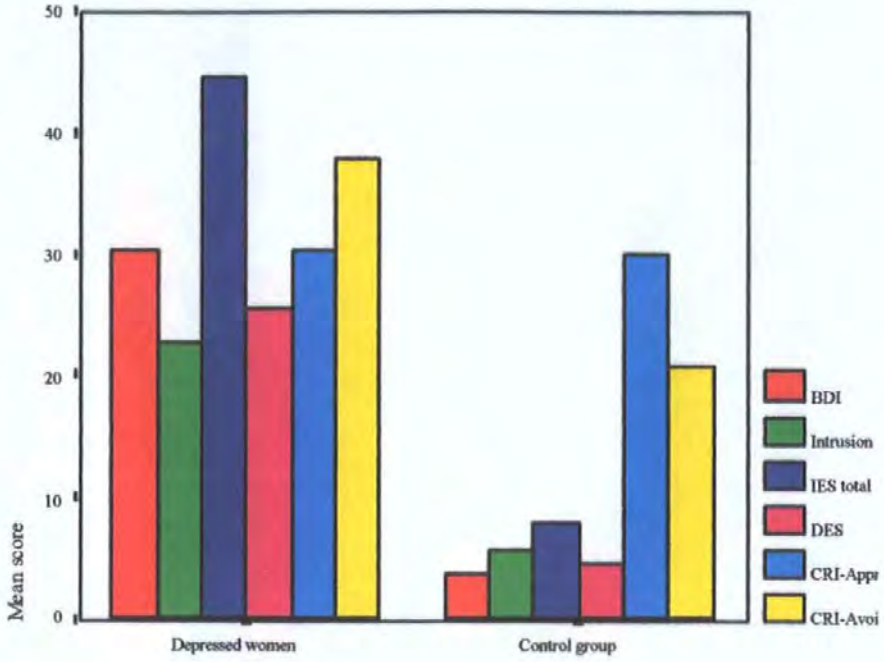
*** indicates significant differences between groups at p.<.001 and ** at p.<.01

The mean scores for both groups on all measures are represented in Figure 1.

Figure 1

Bar chart of mean scores on all measures

for the clinical and control groups



A Mann-Whitney test applied to the intrusion scale of the IES showed that depressed participants experienced significantly higher levels of traumatic IMs than the control participants (Z=-4.63, p.<.001). The same test applied to the avoidance scale and the overall IES total showed similar effects, with depressed participants showing more avoidance of trauma-related stimuli, as measured by the avoidance scale (Z=-4.52, p.<.001) and having higher overall levels of post-traumatic symptomatology, as indicated by total IES score, than the control group (Z=-4.78, p.<.001).

Table 5 shows descriptive data for the diary measure.

Table 5

Descriptive Data for the Intrusive Memory Diaries

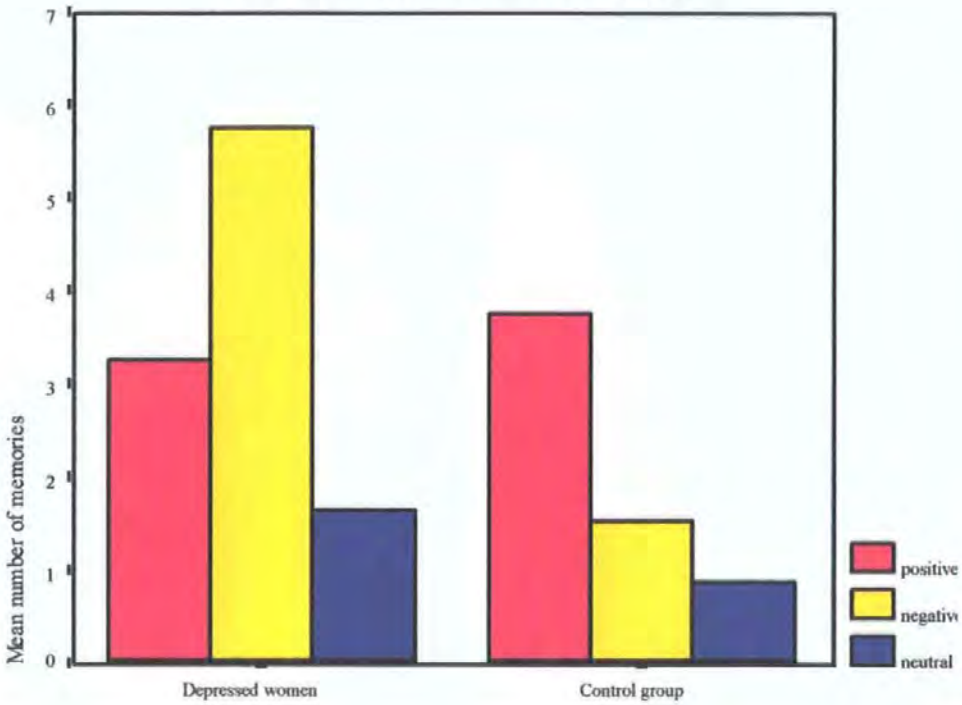
Type of Memory	Means for Clinical Group (N=8)	Means for Control Group (N=8)
Negative	**6**** (Range 2-10)	**2** (Range 0-5)
Neutral	**2** (Range 0-3)	**1** (Range 0-2)
Positive	**3** (Range 0-7)	**4** (Range 1-9)
All	**11*** (Range 8-14)	**6** (Range 3-11)

** indicates significant differences between groups at p.<.01 and * at p.<.05

It was established using a Mann-Whitney test that the clinical group produced a higher total number of IMs (Z=-2.43, p.<.05). Differences between the group with regard to the prevalence of negative IMs were investigated. It was discovered that depressed participants reported significantly more negative memories (Z=-2.89, p.<.01, 1-tailed). There were no significant differences between the groups for reported numbers of neutral (Z=-1.33, p.>.05) and positive memories (Z=-.107, p.>.05). The relative mean numbers of positive negative and neutral memories produced by each group are represented graphically in Figure 2 (overleaf).

Figure 2

The means of positive, negative and neutral intrusive memories in the clinical and control groups.



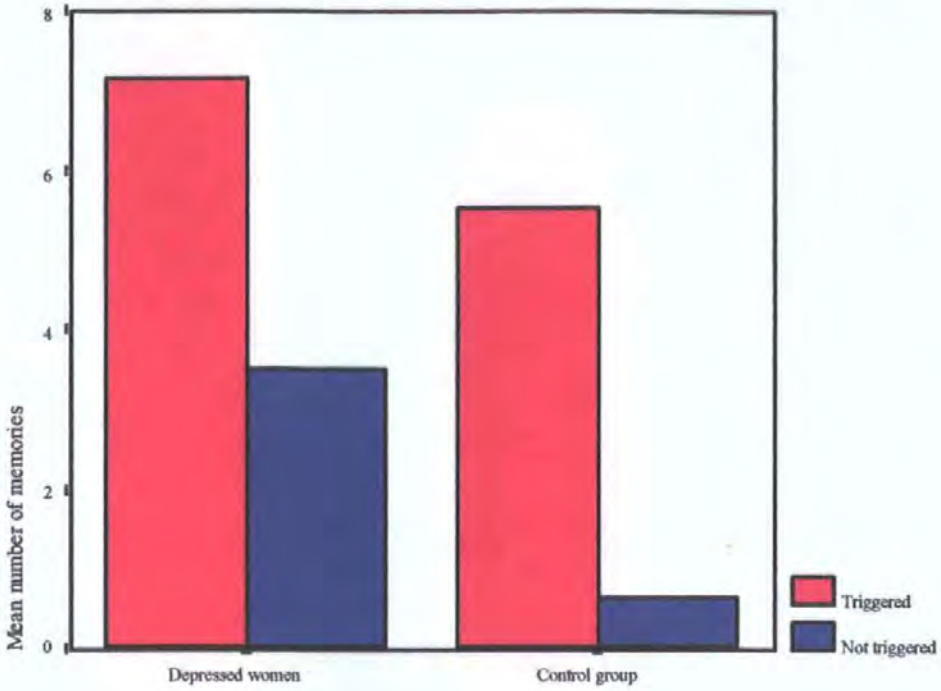
As a further exploration of the possible traumatic nature of IMs in depression subsidiary hypotheses A and B were investigated.

Subsidiary hypothesis A: Depressed participants will report more IMs which are perceived as not having been triggered.

The clinical group perceived 33% of their IMs as not being triggered, whereas the control group reported only 10% of their IMs as not being triggered. A Mann-Whitney test showed that this difference was signficant ($Z=-2.6$, $p.<.01$, 1-tailed). These data are represented graphically in Figure 3 (overleaf).

Figure 3

Mean numbers of memories reported as triggered and not-triggered



Subsidiary hypothesis B: Fewer memories reported by depressed participants than control participants will be rated as being specific.

Chi-square tests on the rating data supplied by the four independent volunteers indicates that two out of the four independent raters categorised significantly fewer memories reported by the depressed participants as being specific than memories reported by the control participants (Rater 1, Chi-square=4.16 df=1, p.<.05; Rater 2, Chi-square=7.86 df=1, p.<.01). The other two independent raters did not categorise significantly different numbers of memories as general/specific for either group (Rater 3, Chi-square=2.88 df=1, p.>.05; Rater 4, Chi-square=1.81 df=1, p.>.05).

Summary: Depressed participants have significantly higher levels of disturbing intrusions, as measured by the IES sub-scale. Depressed participants also reported significantly more

negative IMs than controls on the diary measure. There are no significant differences with regard to positive and neutral memories reported by the groups. Depressed participants report significantly more IMs as not having been triggered, and there is equivocal evidence that depressed participants report significantly fewer specific memories than controls.

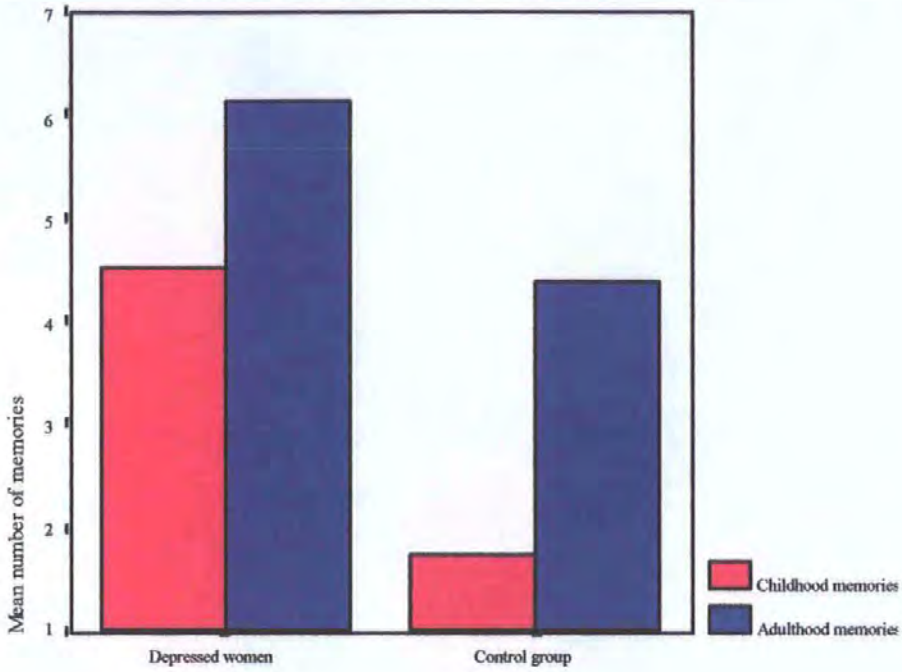
Hypothesis 2: Depressed participants will experience more intrusive memories of events from childhood than controls.

An independent samples t-test indicates that depressed participants report significantly more memories from childhood than the control group ($t=2.47$ $df=14$, $p.<.05$, 1-tailed). There were no significant differences between the groups with regard to the reported numbers of memories from adulthood ($t=.943$ $df=14$, $p.>.05$). A further exploration of the data was made by comparing the relative reported numbers of memories from childhood and adulthood within the groups. A paired t-test indicates that depressed participants do not report significantly different numbers of memories from childhood and adulthood ($t=.68$ $df=7$, $p>.05$). There was a trend for the control sample to report more memories from adulthood than from childhood, however this trend failed to achieve statistical significance ($t=1.97$ $df=7$, $p.=.087$) at the two-tailed level. These data are represented graphically in Figure 4 (overleaf).

Summary: Depressed participants reported significantly more IMs of events from childhood than were reported by the control group. There were no significant within-groups differences in relation to the numbers of memories reported of childhood and adulthood events. However, there was a strong trend in the control group towards the reporting of greater numbers of memories of events from adulthood.

Figure 4

Mean numbers of childhood and adulthood memories reported by the clinical and control groups



3.3 Analyses of coping data

Hypothesis 3: Depressed participants will make more use of avoidant coping strategies in relation to intrusive memories than controls.

Mann-Whitney tests showed that the two groups differed with regard to their overall usage of avoidant coping styles (Z=-2.86, p.<.01) in relation to IMs. Further analyses based on comparison of sub-scale scores showed that the groups differed significantly in their reported usage of Cognitive Avoidance (Z=-3.27, p.<.001, 1-tailed), Acceptance and Resignation (Z=-2.76, p.<.01 1-tailed) and Emotional Discharge (Z=-2.19, p.<.05, 1-tailed). No significant differences were found between the groups in their usage of Seeking Alternative Rewards (Z=-1.07, p.>.05). Mann-Whitney tests were also applied to the data relating to the use of approach coping in relation to IMs. No significant differences were observed between the groups in their reported use of approach coping.

The means of coping strategy usage for each group are presented in Table 6.

Table 6

Coping Responses Inventory Means for the Clinical and Control Groups

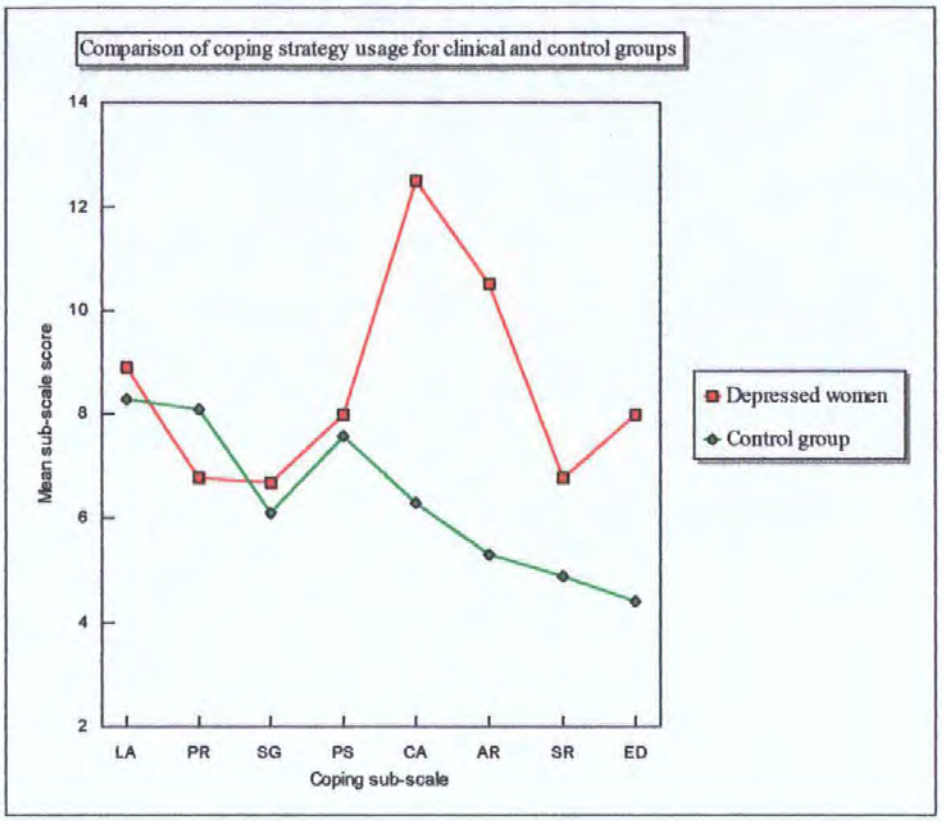
Coping Responses Inventory Scale	Clinical group (N=26) Mean scores	Control group (N=12) Mean scores
Logical Analysis (LA)	**8.9** (Range 0-18, SD=4.5)	**8.3** (Range 0-18, SD=6.3)
Positive Reappraisal (PR)	**6.8** (Range 0-14, SD=4.1)	**8.1** (Range 2-18, SD=4.9)
Seeking Guidance/ Support (SG)	**6.7** (Range 0-14, SD=3.8)	**6.1** (Range 2-14, SD=4.1)
Problem Solving (PS)	**8** (Range 3-16, SD=3.4)	**7.6** (Range 0-17, SD=5.3)
Sum of Approach Coping Scales	**30.4** (Range 8-52, SD=11.9)	**30** (Range 5-62, SD=19.3)
Cognitive Avoidance (CA)	**12.5***** (Range 4-18, SD=3.8)	**6.3** (Range 1-16, SD=5)
Acceptance and Resignation (AR)	**10.5**** (Range 5-16, SD=3.2)	**5.3** (Range 0-13, SD=5.3)
Seeking Alternative Rewards (SR)	**6.8** (Range 0-18, SD=4.9)	**4.9** (Range 0-13, SD=4.3)
Emotional Discharge (ED)	**8*** (Range 3-17, SD=3.9)	**4.4** (Range 0-14, SD=4.8)
Sum of Avoidance Coping Scales	**37.8**** (Range 19-57, SD=8.8)	**20.8** (Range 1-49, SD=16.4)

*** indicates significant differences between groups at p.<.001, ** at p.<01 and * at p.<.05

The means of each coping sub-scale are represented graphically in Figure 5 (overleaf).

Summary: There are significant differences between the groups with regard to their strategies for coping with intrusive memories. Depressed participants make more use of avoidant coping strategies generally, and specifically use more Cognitive Avoidance, Acceptance and Resignation and Emotional Discharge. No differences between the groups were identified in relation to their use of Seeking Alternative Rewards. No significant differences between the groups were observed in their use of approach coping in relation to intrusive memories.

Figure 5



Key to abbreviation: LA= Logical Analysis, PR= Positive Reappraisal, SG= Seeking Guidance and Support, CA= Cognitive Avoidance, AR= Acceptance and Resignation, SR= Seeking Alternative Rewards, ED= Emotional Discharge

Hypothesis 4: Depressed participants who use more approach coping styles in relation to IMs will show greater improvement in depression at follow-up, regardless of initial level of intrusion.

As mentioned earlier only 20 of the 26 original depressed participants were available for follow-up. The follow-up group were compared the participants unavailable for follow-up to asses if there were any significant differences (see section 2.6.2 for further details). The two groups did not differ significantly in their scores on any of the self-report measures, and similarly there were no significant differences between the groups with regard to demographic factors.

Hypothesis 4 was tested using multiple linear regressions. Initially the effects of the demographic "risk" factors on depression outcome were modelled. None of the demographic factors assessed showed a significant association with BDI score at follow-up. The strong predictive value of initial BDI score for BDI score at follow-up was confirmed ($t=3.51$, $p.<.01$). Hence, initial BDI score was entered into all subsequent analyses of the predictive value of other variables. Separate regressions were carried out to assess associations with outcome for all coping scales. This modelling indicated that only Positive Reappraisal showed a significant association with follow-up BDI score when initial BDI score was controlled ($t=-2.37$, $p.<.05$). The inclusion of initial Intrusion score in the model did not increase the amount of variance for which the model accounted, and the entry of any other variables into the equation did not affect the regression co-efficient for PR. Hence, a regression equation which includes initial BDI score and Positive Reappraisal score can account for 50% of the variance in BDI score at follow-up (Adjusted R-square=.50, $F=10.56$ $df=19$ $p.=.001$).

The regression equation for prediction of follow-up BDI is:

$$BDI2 = 12.88 + .52(BDI1) - 1.30(PR1)$$

Summary: A combination of initial BDI score and the use of Positive Reappraisal in relation to IMs is significantly predictive of BDI score at follow-up.

Hypothesis 5: Depressed participants who make more use of avoidant coping will have higher levels of Intrusion at follow-up.

This hypothesis again was tested using multiple regressions. Initial Intrusion score showed a significant association with Intrusion score at follow-up ($t=2.6$ $p.<.05$). Hence, initial Intrusion score was included in all further regression models reported. Initial Avoidance (the

other sub-scale of the IES) score did not show a significant association with follow-up Intrusion score. The associations of all coping sub-scales with follow-up level of Intrusion were assessed separately. The only coping scale which showed a significant association with outcome was Cognitive Avoidance ($t=2.59$ $p.<.05$). The approach coping strategy of Seeking Guidance and Support predicted a lower Intrusion score at follow-up ($t=-2.00$ $p.=.06$), however, this effect was not a strong enough effect to warrant inclusion in the final regression equation. Initial depression score did not show a significant association with Intrusion score at follow-up, and neither did initial DES score. A regression equation which includes initial Intrusion, Cognitive Avoidance accounts for 42 % of the variance in follow-up Intrusion score (Adjusted R-square=.42, $F=7.81$ $p.<.01$).

The regression equation for the prediction of follow-up Intrusion score is:

$$\text{Intrusion2} = -2.91 + .53\ (\text{Intrusion1}) + .45\ (\text{CA1})$$

Summary: A combination of initial level of Intrusion and the use of Cognitive Avoidance in relation to this Intrusion is significantly predictive of level of Intrusion at follow-up. This relationship is not significantly affected by depression level.

3.4 Analysis of the relationship of dissociation to other measures

Hypothesis 6: Depressed participants experiencing high levels of negative intrusive memories will also show high levels of dissociation, independent of level of depression.

A Spearman correlation indicated that intrusion and dissociation are significantly correlated (Rho=.39, p.<.05, 1-tailed N=26). A further test of the association was carried out partialling out the effects of depression, as measured by the BDI score, from both variables. This partial correlation was not significant (Coefficient=.36, p.>.05, 1-tailed N=26). Figure 6 shows a scatterplot of the association between intrusion and dissociation, and Figure 7 shows scatterplots of the associations between depression and intrusion and depression and dissociation. The data represented are for the clinical group only and are derived from the initial data set.

Figure 6

Scatterplot of the association between intrusion and dissociation

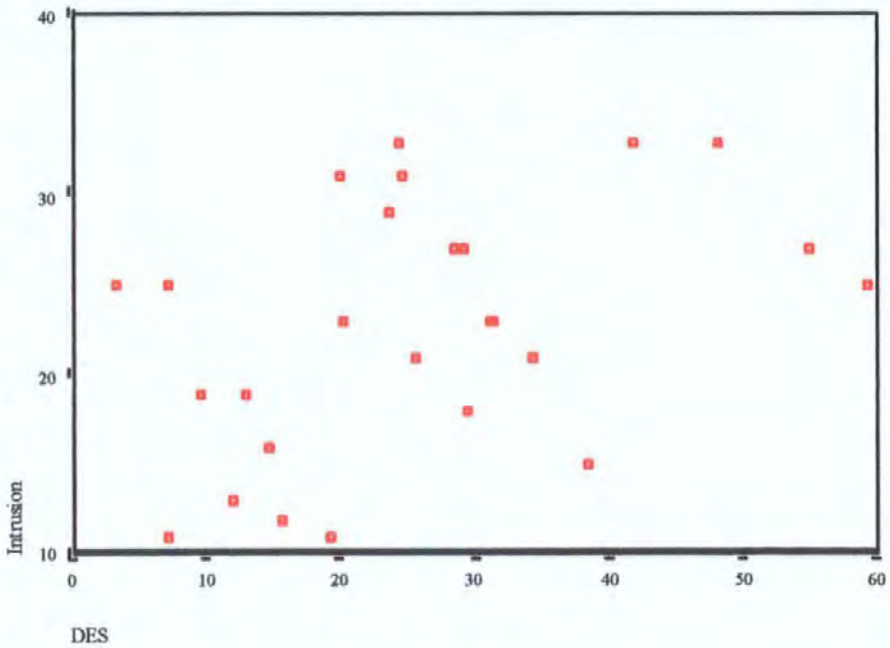
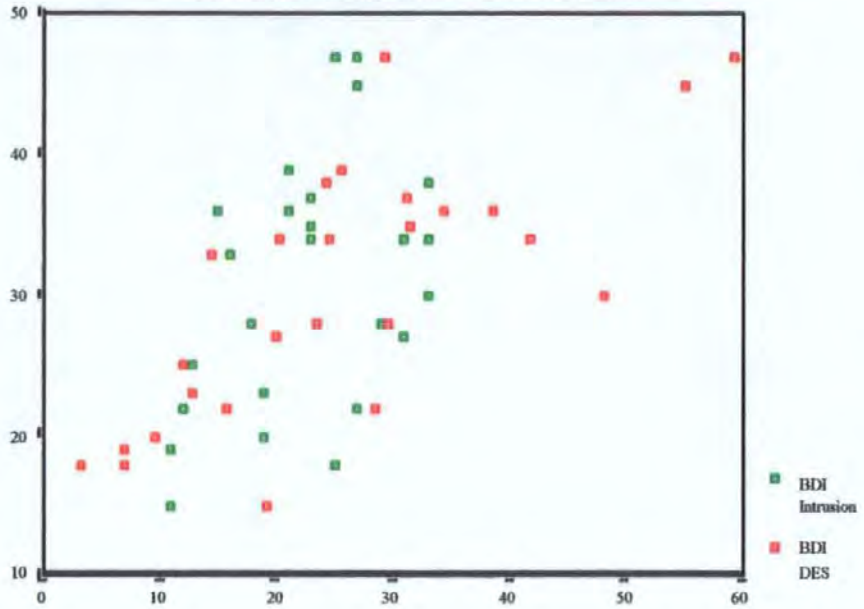


Figure 7

Scatterplot of the associations between depression and intrusion, and depression and dissociation



As a further exploration of the possible role of dissociation in relation to IMs subsidiary hypothesis C was investigated.

Subsidiary hypothesis C: Dissociation scores will be positively correlated with use of avoidant coping strategies.

This hypothesis is a further exploration of the relationship between IMs and dissociation. Dissociation scores were correlated with all coping scale scores. There was a non-significant positive correlation with avoidant coping generally (Spearman's Rho=.12, p.>.05 N=26). However there was a significant positive correlation with the Acceptance and Resignation (Spearman's Rho=.42, p.<.05 1-tailed N=26), and a significant negative correlation with Seeking Alternative Rewards (Spearman's Rho=-.35, p.<.05, 1-tailed N=26). There was a highly significant negative correlation between dissociation and approach coping generally (Spearman's Rho=-.48, p.<.01, 1-tailed), and specifically there were significant negative correlations with Seeking Guidance and Support (Spearman's Rho=-.39, p.<.05, 1-tailed N=26), Positive Reappraisal (Spearman's Rho=-.45, p.=.01, 1-tailed N=26) and Problem

Solving (Spearman's Rho=-.55, p.<.01, 1-tailed N=26). Dissociation was not significantly correlated with any of the other coping sub-scales.

Table 7

Table showing Spearman correlations between DES score and CRI sub-scales

Coping sub-scale	Correlation with DES score
Logical Analysis	-0.13
Positive Reappraisal	-0.45**
Seeking Guidance and Support	-0.39*
Problem Solving	-0.55**
Cognitive Avoidance	0.23
Acceptance and Resignation	0.42*
Seeking Alternative Rewards	-0.35*
Emotional Discharge	0.01

** indicates significance at p.<.01 and * at p.<.05

Summary: there is a significant positive association between intrusion and dissociation. However when the effects of depression severity are partialled out, this association is reduced to a non-significant level. Dissociation shows a non-significant positive association with avoidant coping generally, but a significant positive association with Acceptance and Resignation. It is significantly negatively correlated with Seeking Alternative Rewards (another avoidant coping strategy). Dissociation is significantly negatively correlated with approach coping generally and specifically with Seeking Guidance and Support, Positive Reappraisal and Problem Solving

3.5 Analysis of the relationship between intrusion and outcome in depression

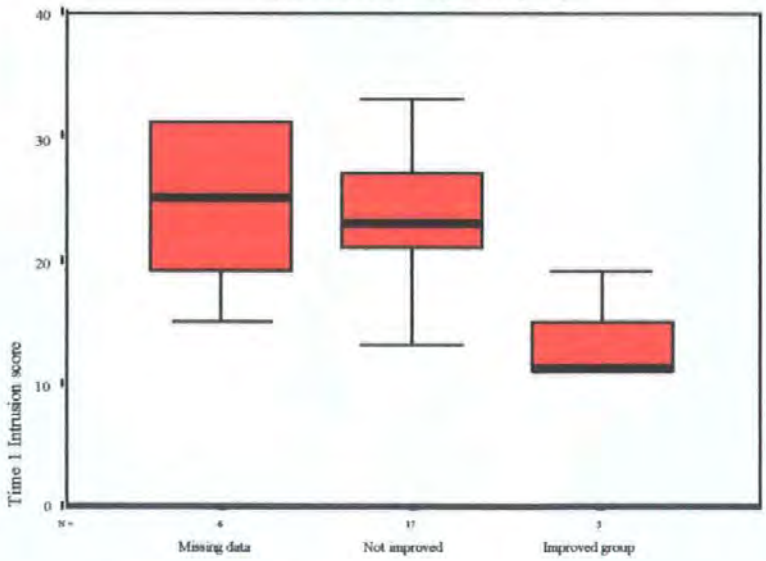
Hypothesis 7: Depressed participants who show most recovery will have lower levels of intrusion at initial assessment.

This hypothesis was investigated using a weighted change measure; this calculation gives a percentage change from initial assessment to follow-up. This measure was correlated with

intrusion. A Pearson correlation of these two variables revealed that there is a negative correlation between level of intrusion and improvement in depression at follow-up. However this correlation is weak and non-significant (Pearson=-.10, p>.05 N=20). A further investigation of this hypothesis was carried out. Depressed participants whose BDI at follow-up was one standard deviation below the group mean were identified. This is a commonly-used expression of clinically significant difference, and hence was used to classify people as significantly better than the rest of the group. Three participants for whom two data sets were available met this criterion. Their initial Intrusion scores are compared in Figure 8 with those of the other seventeen people for whom two data sets were available, and also with the scores of the depressed participants who were not available for follow-up.

Figure 8

Boxplot of Intrusion scores at intial assessment for inproved and not improved groups



Summary: a non-significant negative correlation between initial Intrusion score and improvement in depression was discovered. Comparison of participants who were classified as significantly better than other depressed participants revealed that these improved individuals had lower Intrusion scores at initial assessment.

3.6 Summary of all results

- Analysis revealed that depressed participants were more likely than controls to be unemployed and to be parents. These factors must be considered in relation to the interpretation of other differences identified between the two groups.

- Depressed participants had higher levels of traumatic IMs as denoted by their higher Intrusion scores and by their reporting of more negative and untriggered memories on the diary measure than the control sample. There is evidence from diary data that depressed participants reported fewer specific memories than the control group.

- Depressed participants reported significantly more memories of events from childhood than the control group. Depressed participants did not report significantly different numbers of memories from childhood or adulthood; whereas there was a strong trend for control participants to report more memories from adulthood.

- Depressed participants made more use than the control group of avoidant coping strategies in relation to IMs, specifically Cognitive Avoidance, Acceptance and Resignation and Emotional Discharge. The groups did not differ in their use of the remaining avoidant coping strategy, Seeking Alternative Rewards.

- More frequent reported use of Positive Reappraisal in relation to IMs was predictive of better outcome in terms of BDI score at follow-up, even when initial level of depression was controlled.

- More frequent reported use of Cognitive Avoidance in relation to IMs was predictive of poorer outcome in terms of continued level of intrusion, even when initial level of intrusions was controlled. Seeking Guidance and Support was weakly associated with better outcome.

- A positive association was discovered between level of dissociation and level of intrusion. However this association was reduced to non-significant levels when the effects of depression were removed.

- Dissociation correlated positively with Acceptance and Resignation and negatively with Seeking Alternative Rewards (both avoidant coping strategies). Dissociation correlated negatively with the approach coping styles of Seeking Guidance and Support, Positive Reappraisal and Problem Solving.

- Initial level of intrusion was not significantly associated with depression score at follow-up, however assessment of a sub-group of participants with lower BDI scores at follow-up indicates that they had lower levels of intrusion at initial assessment.

Chapter 4: Discussion

4.1 Achievement of stated aims

The study aimed to investigate the phenomenon and role of IMs in depression. It tested assumptions based on the dual representation theory of PTSD and trauma-related theories of depression. Specifically it established, as predicted by these theories that the depressed women in the study experienced higher levels of negative IMs than controls. This can be interpreted as being indicative of ongoing traumatic processing. It also established that the depressed women experienced more IMs of childhood experiences than controls. This lends support to theories of depression which attach great importance to childhood experiences. The data also confirm that depressed women reported more IMs as being untriggered. This is in line with predictions based on a traumatic processing model of depression, and indicates that these memories are likely to have been situationally activated without conscious awareness. The relationships between intrusive, depressive and dissociative phenomena were investigated. The data showed that there was a positive relationship between intrusion and dissociation, as predicted by the application of trauma models to depression. However it was established that this relationship was mediated by depression severity. This indicates that level of depression may be important in determining whether a woman dissociates as a coping response to negative IMs. Both intrusion and dissociation had stronger relationships with depression than with each other. In confirmation of predictions from the research literature regarding coping and outcome in depression an association was discovered between the use of approach coping in relation to IMs and less severe depression at follow-up. In confirmation of predictions from the PTSD literature it was discovered that the use of avoidant coping in relation to IMs predicted their maintenance.

4.2 Discussion of demographic data

It was necessary to assess demographic differences between the clinical and control groups in this study, as a number of demographic factors have been shown to be associated with the clinical depression. Tests applied to the demographic data obtained for both groups indicated that there were differences between the groups with regard to employment and parental status. Depressed participants were more likely to be unemployed and to be parents. This pattern fits the previous research findings, which have established that both of these factors are associated with higher incidence of clinical depression. Being employed outside the home has been found to be correlated with lower incidence of and better outcome in depression (Caplan et al., 1989; Sherbourne, Hays & Wells, 1995). The direction of causality in this relationship is not established, as more severe depression is more likely to mean that a person is less able to work. Women who have ever become parents have a higher incidence of clinical depression (Kumar & Brockington, 1988); theories differ in their explanations of this phenomenon. Some theorists explain it in terms of social stress and role changes (Oatley & Boulton, 1985), others have hypothesised some biological mechanism which is "switched on" by the experience of pregnancy (see Kumar & Brockington, 1988 for review). As no attempt was made in this study to match depressed and non-depressed participants the identification of such differences might have been hypothesised. There were, however, no differences between the groups in relation to age, marital status and education, all of which have also been linked to the incidence of depression. Other differences identified between the groups with regard to the analyses of hypotheses must be interpreted in the context of these significant differences.

4.3 Evidence relating to hypotheses

4.3.1 Hypothesis 1: Depressed participants will experience more traumatic intrusive memories than controls.

This hypothesis was investigated using both self-report questionnaire data and data from the IM diaries. It was established that depressed participants had significantly higher scores on the Intrusion sub-scale of the IES; indicating that they experienced more trauma-related IMs than the control group. They also had higher scores on the Avoidance sub-scale indicating that they show more avoidance of trauma-related stimuli than the control group. The significantly higher overall score on the IES can be interpreted as indicating that depressed participants have higher overall levels of post-traumatic symptomatology than the control participants. The diary measure confirmed this pattern; with depressed participants reporting significantly more negative memories than controls. There were no significant differences with regard to the numbers of positive and neutral memories reported by the two groups, and interestingly the depressed participants reported a significantly higher number of IMs overall.

Subsidiary hypothesis A: Depressed participants will report more IMs which are perceived as not having been triggered.

The current data confirm this hypothesis with depressed women reporting greater numbers of untriggered IMs than control participants. This indicates that these memories are likely to have been situationally activated without conscious awareness, and are therefore more likely to have been traumatic in nature.

Subsidiary hypothesis B: Fewer memories reported by depressed participants than control participants will be rated as being specific.

This hypothesis applies this previously-observed finding to IMs rather than deliberate autobiographical recall. The data from the present study lend equivocal support to this hypothesis. The two raters who identified a difference between the two groups in relation to

the numbers of general/specific memories reported did so in the expected direction. However, the other two raters did not classify significantly different numbers of memories from either group as being specific.

4.3.2 Hypothesis 2: Depressed participants will experience more IMs of events from childhood than controls.

The data indicated that depressed participants did experience more memories of childhood events than controls. Indeed depressed women reported roughly equal numbers of childhood and adulthood memories. This contrasted with a strong trend in the data for control participants to report more memories from adulthood. This effect just failed to achieve significance at the 5% level.

4.3.3 Hypothesis 3: Depressed participants will make more use of avoidant coping strategies in relation to intrusive memories than controls.

The data suggest that the clinical and control groups differed in their coping with IMs in the expected direction. The sub-scales on which the two groups differed were Cognitive Avoidance (Definition: Cognitive attempts to avoid thinking realistically about a problem), Acceptance and Resignation (Definition: Cognitive attempts to react to the problem by accepting it) and Emotional Discharge (Definition: Behavioural attempts to reduce tension by expressing negative feelings). They did not differ from the control group in their use of approach coping or in their use of the avoidant strategy of Seeking Alternative Rewards (Definition: Behavioural attempts to get involved in substitute activities and create new sources of satisfaction). The lack of differences between the groups with regard to Seeking Alternative Rewards probably reflects the fact that it is quite a positive coping strategy and

might be hypothesised to be related to active affect regulation, rather than to the other more passive avoidant strategies.

4.3.4 Hypothesis 4: Depressed participants who use more approach coping styles in relation to IMs will show greater improvement in depression at follow-up, regardless of level of intrusion.

The linear regressions showed that, even controlling for initial BDI score, the use of the approach coping strategy of Positive Reappraisal (Definition: Cognitive attempts to construe and restructure a problem in a positive way while still accepting the reality of the situation) in relation to IMs was significantly predictive of better outcome in depression A regression equation including initial BDI score and PR score accounted for approximately 50% of the variance in follow-up BDI score. Hence it is confirmed that the use of this particular approach coping style in relation to IMs is associated with greater improvement in depression at follow-up.

4.3.5 Hypothesis 5: Depressed participants who make more use of avoidant coping will have higher levels of Intrusion at follow-up.

It was discovered, in confirmation of this hypothesis, that even controlling for initial Intrusion level, the avoidant coping strategy of Cognitive Avoidance (Definition: Cognitive attempts to avoid thinking realistically about a problem) was significantly predictive of a higher Intrusion score at follow-up. The approach coping strategy of Seeking Guidance and Support (Definition: Behavioural attempts to seek information, guidance or support) was predictive of lower Intrusion score at follow-up, but its predictive power was not strong enough to warrant inclusion in the regression equation.

4.3.6 Hypothesis 6: Depressed participants experiencing high levels of negative IMs will also show high levels of dissociation, independent of level of depression

The study data show that there was a positive relationship between level of intrusion and level of dissociation. However when the effects of concurrent level of depression are partialled out this association becomes very weak. Hence, hypothesis 6 is not confirmed. There is a positive association between the experience of negative IMs and increased dissociation, as predicted by the application of a traumatic processing model. However this relationship is mediated by depression severity, indicating that level of depression is important in determining whether an individual dissociates in response to negative IMs.

Subsidiary hypothesis C: Dissociation was correlated with all of the coping sub-scales. It correlated positively with Acceptance and Resignation and negatively with Seeking Alternative Rewards, Positive Reappraisal and Problem Solving. These results taken together would seem to indicate that dissociation, rather than being a coping strategy which actively keeps traumatic affects and experiences out of consciousness, is actually more closely allied with passive resignation in the face of emotionally distressing experiences. This idea is supported by its robust correlation with depression.

4.3.7 Hypothesis 7: Depressed participants who show most recovery will have lower levels of intrusion at initial assessment.

A simple test of the association between improvement in depression and initial level of intrusion did not show a significant relationship. However, splitting the participants who completed the follow-up data collection into groups based on whether they were significantly better than the rest of the group showed that the improved sub-sample had significantly lower intrusion scores at initial assessment. The number of depressed participants who were classified as significantly better was very small (N=3), and hence this result should perhaps

be best interpreted as an indication that level of intrusion in depression *may* have an important association with outcome for the depression.

4.4 Methodological Issues

Before placing the results obtained in this study in the context of the existing theoretical and research literature, it is necessary to assess the amount of confidence which can be placed in them. A number of methodological issues impact on this level of confidence.

4.4.1 Design

As a major aim of this research was to explore the predictive power of coping for outcome of depression and intrusion, a longitudinal study was most appropriate. It is a major strength of the study that a longitudinal design was employed to test these relationships. A weakness, however, is that no matching procedures were employed between clinical and control participants. Significant differences have been discovered between the groups on the important and relevant demographic factors of employment and parental status. This diminishes the amount of confidence which can be placed in results obtained by comparing the two groups.

4.4.2 Measures

The BDI and IES have achieved the status of "industry standard" measures within their related research literatures. Their use here allows a great deal of comparability with both the depression and PTSD literatures. The use of the IES in this study is slightly non-standard as the respondent is not limited to reporting intrusions and avoidance related to one particular event. There are precedents for this use of the IES in previous research (e.g. Kuyken & Brewin, 1994a; Spencely & Jerrom, in preparation), and in view of the likelihood of

depressed women having experienced multiple stressors in childhood and adulthood this was deemed the approach most likely to accurately represent their experiences. The CRI was selected to assess coping as its author has published widely on the relationship between depression, coping and outcome (e.g. Billings & Moos, 1981, 1982, 1984, 1985; Moos et al., 1990) and the CRI has emerged from this work. Hence, the use of this measure allows a great deal of comparability of the present coping data with other data on coping in depressed populations. The DES is a highly valid and reliable measure (see Appendix 2 for further data), and again its use here allows comparability of the study sample with previous studies of dissociative symptomatology in other populations. Finally, in relation to the diary measure, it could be hypothesised that completing this measure created the IMs reported through task demand. Attempts were made to reduce task demand to a minimum, and the ease with which all participants could relate to the experience of IMs would seem to indicate that they were not created by the study. Also, IMs can be conceptualised as being quite similar to the negative automatic thoughts (NATs) of cognitive theory. NATs are posited as existing and influencing behaviour and affect without being entirely conscious, until examined in therapy. In the same way it seems likely that the diary task may have made participants more aware of their experiences of IMs but is unlikely to have actually *caused* them.

4.4.3 Depressed Participants: There are a number of important concerns regarding the participants in the study. The overall sample size is not very large, depressed participants N=26 and control participants N=12, hence statistical power is low. The unavailability for follow-up of 6 of the clinical participants further reduces statistical power. This drop-out rate constitutes 23% of the total clinical sample, and is highly regrettable. Also there was relatively little significant improvement in the participants who did complete the follow-up. This may reflect a sampling problem. The current referral criterion for entry into secondary

mental health services is that the individual is suffering from "serious and enduring mental illness". For a depressed woman to be referred to the kind of services from which the author recruited she would have to be suffering from a depression which was particularly severe and/or chronic in nature. Severity and chronicity of depression predict poor outcome, hence the time-scale of the study may have been inadequate to observe much change in the particular sample obtained. The time-scale selected was based on both practical constraints, and on literature pertaining to the length of depressive episodes. However, it may be that the research on lengths of depressive episodes which was consulted in the design stage of the study was conducted on less uniformly severe samples. It is also of note that none of the participants approached for the study were excluded on grounds of having an Intrusion score of zero, this contrasts previous research in the area which has identified depressed women who do not experience negative intrusions (Spencely & Jerrom, in preparation). The results of the present research might be taken to indicate that all depressed women suffer with disturbing IMs, it should be noted that this is not necessarily the case. The complete penetrance of IMs in the depressed sample studied here may, again, reflect sampling procedures.

A final issue of note here is that levels of symptomatology in this sample are very high. The mean BDI score is 30 which indicates that this is a severely depressed sample. Also of note is that the mean IES score for the sample is 45, which is higher than the mean for the Kuyken and Brewin (1994a) study which sampled depressed women with acknowledged histories of childhood sexual abuse (CSA), and indeed is higher than any of the PTSD studies summarised in Table 1 (section 1.6). The mean dissociation score in this sample is similarly very high at 26, this is approximately double the mean score which was observed in Carlson et al.'s (cited in Carlson & Putnam, 1993) study of 102 individuals with affective disorders

(see table 2 p.35 for comparison). The score obtained here is closer to the mean obtained in a sample of PTSD sufferers. Hence, this may indicate that the sample obtained in this study is skewed in a manner likely to support the application of trauma models to depression. Of course, the converse may also be true, that severe depression which presents with disturbing IMs is most accurately viewed, and perhaps treated, as a post-traumatic disorder rather than an affective disorder. The dissociative symptomatology in the sample and its implications are discussed further in section 4.5.2.

4.4.4 Control participants

The control sample is small, and hence is not likely to be highly representative of never-depressed women. This difficulty can be offset by comparison of control data with previous research on the study phenomena with non-clinical samples. Obviously this is not ideal, as the present study has established that none of the control participants have ever had an episode of clinical depression. The life-time incidence rate for clinical depression in the general population is 10-20% (Boyd & Weissman, 1981), hence it is likely that at least some of the people included in other studies are either currently depressed or are remitted depressives. However the relatively large samples included in some of the research and the replication of results indicates that some measure of confidence can be placed in their being representative of "normal experience". A particular issue in relation to the completion of the CRI regarding coping with IMs is that three control participants had to complete the CRI in relation to experience of negative IMs which occurred more than a week ago. Each of these control participants was easily able to remember recent experiences of negative IMs, which seems to indicate that experience was relatively available for examination, and that their reports of their experience and behaviour are not likely to be very inaccurate. However the fact that they are reporting coping with an experience which they have not had very recently

may make their data less comparable to that of the clinical group. A further study in this area might overcome this limitation by selecting only control participants who have experienced negative IMs within the last week. However this approach may have its own disadvantages, as it may represent a selection bias in favour of the "worried-well" rather than a truly non-depressed sample.

4.4.5 Analyses of data

Statistical examination of the data obtained in the study revealed that many of the distributions of scores were not normal. Hence non-parametric tests are often used in the analyses related to hypotheses. It should be noted that non-parametric tests are intrinsically less powerful than parametric tests and that the statistical analyses applied here, whilst being technically correct, are not the most powerful tests of the research hypotheses.

4.4.6 Summary of methodological issues

The longitudinal design of the study is a particular strength. However the samples in the study are small, hence statistical power is low. The lack of matching procedures between clinical and control participants reduces the amount of confidence which can be placed in comparisons between the two groups, although this can be offset by comparison of the present data with previous research findings. The measures used in the study are generally highly valid and reliable and were chosen for maximum comparability with previous studies in related areas. The depressed sample in the present study did not show much improvement possibly indicating that the sample is skewed towards severe and/or chronic depression rather than representing a range of depression severity. Also, unlike other studies, all women approached for this study experienced negative IMs. This may be another indication that the study sample are particularly distressed in comparison to participants included in other

studies. The generally high levels of symptomatology in the sample may over-emphasise the applicability of trauma models to depression. Finally, non-parametric tests are often used in analyses related to study hypotheses, this represents a further loss of power in the study.

4.5 Integration of current data with existing literature

Having considered the methodological limitations of the present study and their effects on the confidence which can be placed in the results obtained, it is now possible to consider their place within the existing literature regarding depression and IMs.

4.5.1 Evidence for the traumatic nature of intrusive memories in depression

The study established that depressed women have higher levels of negative IMs than non-depressed women. This replicates the findings of previous research into IMs in depression (e.g. Spencely & Jerrom, in preparation), and is a further demonstration of the substantial symptom over-lap between depression and PTSD (e.g. Davidson & Foa, 1991). The fact that depressed women report more negative IMs than non-depressed women can be interpreted in terms of previous stressful/ traumatic experiences increasing vulnerability to depression. Hence the relatively greater numbers of proximal and distal stressors experienced by the depressed women render them more vulnerable to depression and also cause the post-traumatic symptom of IMs. The fact that depressed women report more IMs of all types than non-depressed women may indicate that depressed women are more sensitive to their internal states and contents of consciousness than non-depressed women. A high level of self-focused attention is a cognitive factor which has been linked with depression (see Wood et al., 1990), it is hypothesised to promote the maintenance of depressed mood by amplifying negative thinking/affect, and by interfering with cognitive performance thereby rendering the person less able to cope with stress/difficulties. This high self-focus can however be

re-interpreted as a parallel of the hypervigilance observed in post-traumatic reactions. Negative IMs can be conceptualised as internal trauma-related stimuli, which are highly salient for the individual and therefore focus attention inward. The PTSD literature demonstrates that traumatised individuals preferentially process trauma-related stimuli (e.g. McNally, English & Lipke, 1993), hence the increased self-focus which leads to reporting of higher numbers of IMs by depressed women might be interpreted as being a result of traumatic experiences, rather than being a product or cause of their depressions.

In confirmation of predictions based on the dual representation theory of PTSD (Brewin et al. 1996) depressed women reported more IMs as being untriggered. This indicates that the IMs of depressed women are more likely to be situationally activated without conscious awareness, and hence are more likely to be traumatic, than the IMs of non-depressed women. This may seem to contradict the point made regarding the increased self-focus of depressed women. In fact, the dual representation theory can explain both of these phenomena. The physical effects of trauma have been hypothesised to favour neural activity in brain structures which serve non-conscious processing (Jacobs & Nadel, 1985), hence a great deal of trauma-related information is stored in a form which is not consciously accessible. Such memories are activated by trauma-related situational factors (including emotional state) which are often not consciously recognised. The commonalties between the present situation and the trauma situation may actually be excluded from consciousness by the operation of an "avoidance schema" (Brewin et al., 1996). However if a SAM is activated and intrudes into consciousness it is a highly salient event, and is preferentially processed by the woman. Hence, both the high levels of IMs reported by depressed women and their perceived untriggered nature are explicable within the framework provided by the application of traumatic processing models. Berntsen (1996) notes that, although current mood is highly

predictive of the valence of IMs in a non-clinical sample, it was reported by the participants as being the commonality between the memory and the current situation in only 14% of cases. Berntsen interprets these findings as indicating that the effect of current emotional states on the release of IMs may sometimes be subliminal. This lack of conscious connection between current mood state and IMs may actually be intensified in depressed women because of their high concurrent levels of dissociation. The "lack of normal integration of thoughts feelings and experiences into the stream of consciousness and memory" (Bernstein & Putnam, 1986) may contribute to the higher incidence of memories being reported as untriggered by the depressed group, when actually the trigger is an internal or external trauma-related stimulus. The relationship of intrusion, depression and dissociation is discussed in Section 4.5.2.

The study data give equivocal support to the relatively generalised nature of autobiographical memory in depressed individuals. The equivocal nature of this support may reflect the fact that the memories studied here are IMs (which are hypothesised to be encoded and stored in different ways) rather than the product of deliberate retrieval attempts. The over-generalised nature of personal memories in depressed persons has been explained in terms of depressed persons aborting memory searches early to avoid accessing distressing memories (Williams, 1994). This represents a regression to a developmentally-earlier mode of cognitive function in order to regulate mood. This theory is an interesting cognitive parallel of McKenzie and Wright's (1996) two-trauma model of psychological distress, which posits a kind of physiological flashback mechanism, which when triggered by a current stressor which is contextually-similar to earlier trauma causes a reversion to the use of the developmentally-earlier brain structures in use at the time of the original trauma. The application of the dual representation theory to these data offers another perspective, which is

not contradictory to those already discussed. This theory would explain the phenomenon in terms of most processing of traumatic experiences taking place at a non-conscious level. Hence there is relatively little information stored in semantic memory and available for conscious examination. This explanation would also account for the observation of the same memory bias in PTSD (McNally et al., 1994).

4.5.2 The relationship between dissociation, depression and intrusion

The role of dissociation in depression is not clear. For the purposes of this study, and indeed in much theoretical and research literature (e.g. Briere, 1992; Greaves, 1996; Putnam, 1989) dissociation has been conceptualised as a (possibly non-conscious) coping mechanism which serves the purpose of keeping trauma-related memories and affects out of consciousness. Dissociation was found to be associated with level of intrusion, as predicted by its conceptualisation as a coping strategy deployed to deal with trauma-related stimuli. However when the effects of depression were removed from this relationship the association became non-significant. Both intrusion and dissociation were more robustly correlated with depression than with each other. It is arguable that if someone dissociates "successfully" then they should not be aware of having any post-traumatic symptoms such as disturbing IMs, and hence the observed lack of a robust association between intrusion and dissociation could be predicted.

The more robust association between dissociation and depression reflects related findings that dissociation correlates best with general measures of level of distress (e.g. Dunn et al., 1993). This strong correlation with distress may indicate that dissociation is a kind of "psychic analgesia" (e.g. Herman, 1992), which is applied as an attempt to mitigate aversive emotional states, rather than a strategy deployed to avoid trauma-related

cognitions/memories. This more passive conceptualisation of dissociation fits better with the pattern of associations noted here between dissociation and the coping sub-scales of the CRI. This idea is further supported by the observation that dissociation often seems to operate without conscious effort or awareness (e.g. Putnam, 1989). Indeed dissociation is often described in a manner analogous to physical homeostatic mechanisms. In contrast PTSD sufferers are able to report on conscious strategies which they use to avoid trauma-related stimuli. The avoidance of aversive emotional states is hypothesised to prevent the integrative processing of trauma memories and therefore prevent recovery from PTSD (Brewin et al., 1996). Hence, the presence of high levels of dissociation should predict poor outcome. In the present study DES score was entered into, and discarded from, regressions to predict follow-up levels of both depression and intrusion. The fact that DES score had no significant predictive power for either outcome seems to indicate that its role in the maintenance of psychological distress is not, as yet, properly understood.

Some comment on the level of dissociation in the depressed sample studied is warranted. The sample shows a very high level of dissociation (mean=26, see Table 2 section 1.7.5) for comparison) especially considering that i) it is an outpatient sample and ii) it is a sample of "uncomplicated" unipolar depressives. This may, again, indicate the influence of the sampling problems noted in section 4.4.3. Scores in this range on the DES are strongly indicative of dissociative disorders (Carlson & Putnam, 1993), and the unrecognised presence of this level of dissociation in a depressed sample may actually indicate mis-diagnosis (i.e. if this level of dissociation had been noted some women would have received joint diagnoses of depression and a dissociative disorder, and hence would not have been eligible for the study). The great under-recognition of dissociative symptoms in psychiatric patients generally, is noted in Saxe et al.'s (1993) survey of dissociative symptomatology in an inpatient series. A

possible explanation which fits with the data obtained in the study is that this sample contains a high number of individuals who suffered serious childhood abuse, rather than a simple lack of adequate parenting which some models of depression posit as being sufficient to create vulnerability to adult depression (e.g. Bowlby, 1980). This possibility is further supported by the observation that the mean total IES score obtained for the depressed sample in this study is 45, which is 7 points higher than the mean score which Kuyken and Brewin (1994a) observed in a population of depressed women who had acknowledged histories of childhood sexual abuse (CSA). High levels of dissociation have also been observed in populations of women with acknowledged histories of CSA (Chu & Dill, 1990), however the scores obtained in the present study are closer to those observed in populations of PTSD sufferers (see p. 35). This may indicate that the sample obtained in this study is skewed in a manner likely to support the application of trauma-models to depression. Conversely it may indicate that severe, chronic depression is better conceptualised as a post-traumatic condition.

4.5.3 Evidence for the importance of childhood experiences in adult depression

The data obtained in this study can be interpreted as indicating that depressed women show a very different pattern from controls, with regard to the relative availability, and indeed intrusion, of childhood experiences. Of relevance in the interpretation of this finding is Berntsen's (1996) finding that in her non-clinical sample the majority of IMs reported were from the recent past, 58% of the memories were from the last year and approximately two-thirds were from the last three years. Indeed Berntsen concludes that IMs in non-clinical samples show the "classic retention function" (p.408.9) established in more mainstream memory research. Considered in the context of these findings the easy availability of childhood memories for depressed women is even more striking.

In the context of predictors established by Berntsen most of the IMs reported by depressed women should be mood-congruent i.e. negative; the data confirm that depressed participants report significantly more negative memories than controls. However, a within-group comparison showed that depressed participants did not report significantly more negative than positive IMs. This finding lends support to the view that the bias of memory in depression in favour of the negative is not *solely* a product of mood (Brewin et al., 1993), but probably reflects a greater store of negative experiences. The equivalent availability and intrusion of memories of events from adulthood and childhood contradicts the very significant recency effect discovered by Berntsen. This would seem to indicate that the events which are the subject of IMs may be "super-congruent" with current mood (i.e. very negative, or sharing multiple features with the current internal/external context, such as experience of feelings of sadness combined with feelings of helplessness or guilt). Childhood memories would have to be *more* mood or situation-congruent than adulthood memories to overcome the strong recency effect. Another possibility is that they are of very unusual events (Berntsen found that unusual events were prioritised as the subject of IMs in her non-clinical sample). These two possibilities are not mutually exclusive, and of course, two attributes of traumatic events are that generally they are highly unusual and very negative. Hence, the relative availability of IMs from childhood to depressed women indicates support for a traumatic processing model of depression and also for the importance of childhood events in adult depression. Of course it is not possible to draw conclusions regarding the importance of childhood events in the *causation* of depression, but the data do indicate that childhood events are processed in depressive episodes. This is a fascinating observation of the anatomy of depression and a strong indication of the likely importance of childhood events. It also lends support to theories of depression which assign great importance to childhood experiences. These findings must be interpreted in the context of the

very high levels of symptomatology exhibited by the study sample, and the possibility that a significant number of the women may have suffered childhood abuse. These findings may indicate the particular importance of childhood experiences in severe and/or chronic depression.

4.5.4 Coping and outcome for depression and intrusion

The clinical and control groups differed in their use of avoidant coping strategies in relation to IMs, but not in their use of approach coping. This probably reflects the previous finding that the IMs experienced by the depressed group were more negative; as distressing events lead people to deploy more coping of all types (e.g. Holahan & Moos, 1987). The present results contrast some of the previous findings regarding coping and depression. Emotional Discharge has been found to be consistently significantly associated with depression in a number of studies (e.g. Billings & Moos, 1984; Sherbourne et al., 1995). The relatively weak effect (significance at the 5% level is being conservatively interpreted see p.63) may reflect a pattern of coping in depressed women which is specific to IMs; as most of the previous research has been concerned with stressful events in the external world. The use of Cognitive Avoidance in relation to IMs would be predicted by theories of traumatic processing. The IMs constitute internal trauma-related stimuli and hence efforts are made to avoid them in order to reduce distress. The importance of Cognitive Avoidance in predicting the maintenance of IMs is discussed below. The frequent usage of Acceptance and Resignation in relation to IMs can be interpreted as either symptomatic of the emotional state of the depressed group; in that it may reflect general subjective feelings of helplessness or lack of motivation, or it may be interpreted as reflecting chronic emotional processing (Brewin et al., 1996; see section 1.5.2). In CEP a cycle may evolve in which the person is not able to fully process the IMs because of the level of accompanying emotional distress, and hence the IMs

retain their original intensity and power to distress. The distress associated with the IM means that the person is unable to employ the approach coping strategies which may result in integration. If this cycle continues for long enough it would almost inevitably lead to feelings of powerlessness, and to a resigned acceptance that one cannot influence one's experiences of negative IMs.

Interestingly none of the avoidant coping strategies were predictive of outcome in depression which contrasts previous findings and, again, may indicate a pattern of coping and outcome in depression which is particular to the management of internal experiences. It is also possible that this finding is influenced by the fairly severe level of depression in the study sample and the relatively small amount of improvement which took place between initial assessment and follow-up. The role of Positive Reappraisal (PR) in relation to the prediction of outcome is interesting and can be interpreted in a number of different ways. On examination of the actual questions included in the PR sub-scale, for example "Did you tell yourself things to make yourself feel better?", "Did you try to tell yourself that things would get better?", "Did you think about how this event could change your life in a positive way?" there are indications that the ability to soothe the self in distress is being measured, and is important in outcome in depression. This relates directly to Kohut's (1971) theoretical model of depression, which hypothesises that the lack of such an ability, which itself results from inadequate parental care, is a vulnerability factor for depression. The current data would seem to support this hypothesis in two ways. The data on the availability of childhood memories lend support generally to theories which posit the importance of childhood experience in the aetiology of depression, and the data on coping lends support to the idea that outcome can be related to the presence or absence of the ability/skill of self-soothing.

PR is defined as "cognitive attempts to construe and restructure a problem in a positive way while still accepting the reality of the situation" this might be viewed as being analogous to a search for meaning in the experience to which the IM relates. Silver, Boon and Stones (1983) studied the effects of a search for meaning in traumatic (father-daughter incest) experiences on current symptomatology. They found that women who were currently searching for meaning in their experiences were more troubled by intrusions of their experiences and showed poorer psychological functioning than those who were no longer searching for meaning. Those who had found a subjective meaning to their experiences were more likely to have had the opportunity to ventilate their feelings about their victimisation. Hence it seems that a supportive confidante is important in achieving some level of integration of traumatic experiences. Interestingly, all but two of the women studied who reported having found some meaning in their experiences still continued to search, which may indicate that their seeming psychological health actually represents inhibited emotional processing and that later stressors may re-awaken their post-traumatic symptoms.

Related to this issue are the study findings regarding the effects of coping on outcome for intrusions. The best predictor of follow-up level of intrusion in the study was reported use of Cognitive Avoidance, with high levels of reported use of CA being predictive of higher levels of intrusion at follow-up. The reported levels of avoidance probably reflects the presence of chronic emotional processing in the depressed sample. Integration of past traumata has failed, (as demonstrated by continued IMs) for any of a number of reasons (see section 1.5.2), and hence the person becomes caught in a cycle of intrusion and avoidance, which actually acts to maintain post-traumatic symptoms. The findings obtained here parallel more general findings in the PTSD literature regarding coping and outcome that avoidant coping is associated with the maintenance of the disorder (e.g. Solomon, Mikulincer & Avitzur, 1988)

The present study confirms this in relation to management of intrusive symptoms. This indicates that a structured "working through" of IMs within a supportive therapeutic relationship may be the best long-term approach to the management of traumatic IMs. This hypothesis is supported by the relatively weak, but interesting, predictive relationship discovered in the present study between reported use of Seeking Guidance and Support and lower levels of intrusion at follow-up. This seems, again, to indicate that an opportunity to talk about experiences within a supportive relationship promotes the degree of integration of traumatic experience that is necessary to break the cycle of intrusion and avoidance, and to thereby promote the resolution of depression.

4.5.6 The applicability of trauma models to the study of depression

The pattern of results obtained in the present study are generally highly supportive of the usefulness of applying models of post-traumatic reactions to depression. The study findings strongly indicate the traumatic nature of IMs experienced by depressed women. The data confirm that the IMs experienced by depressed women are more negative than those experienced by non-depressed women and that they are more likely to be reported as being untriggered which fits the pattern predicted for traumatic memories. Depressed women seem to report fewer specific memories which also fits the pattern predicted for traumatic/distressing memories. The easy availability of childhood memories to the depressed sample indicates that childhood experiences are important in depression, and that memories of childhood experiences are being processed in depressive episodes. This lends support to theories which propose childhood traumata as being important in the aetiology of adult depression. The pattern of coping and outcome for depression obtained here is slightly different from that identified in the previous literature, this may be because the phenomenon studied here is an internal rather than external stressor or that this study has isolated a

specific post-traumatic symptom within depression. The role of cognitive avoidance in the maintenance of intrusions follows the pattern predicted by the application of trauma models. The lack of significance of dissociation in predicting outcome is the only area in which the study contradicts the predictions of the PTSD literature. This may indicate that the role of dissociation in psychological disorder is not yet adequately understood.

4.6 Clinical implications of the current study

The data obtained in this study indicate that traumatic processing may be ongoing in the context of depressive episodes. The data also indicate support for models of depression which assign great importance childhood events. The clinical relevance of these findings will now be considered. It was noted earlier that, unusually, all of the depressed sample studied here experienced negative IMs. This is not always the case and putative treatments discussed here should really only be considered for depressions which are characterised by high levels of disturbing intrusions.

There are a number of indications from the study data and other literature (e.g. Silver et al., 1983) that the opportunity to ventilate feelings about experiences of trauma promotes completion of processing, and that avoidance maintains levels of intrusion. The application of treatments to specifically designed to reduce IMs might break into the self-maintaining cycle of avoidance and intrusion. If intrusion can successfully be reduced, experiences of accompanying aversive emotional states would be reduced, which should result in a lifting, if not complete resolution, of depression. A variety of approaches can be used to reduce intrusion; ventilation within a supportive relationship may be enough to promote integration in some people, however more focused approaches, such as eye-movement desensitisation may be necessary for others. The PTSD models (e.g. Brewin et al., 1996, Horowitz, 1986)

suggest that some kind of reconciliation between pre-existing models of the world and trauma-related information is necessary for recovery. Hence it is probably not advisable to consider the use of desensitisation techniques as a treatment in isolation.

Positive Reappraisal was linked earlier to the concept of "self-soothing". This concept may indicate a useful therapeutic approach with the kind of distress experienced by the women in this study. The therapist who provides "warmth, positive regard, and genuine interest/empathy" (Gotlib & Hammen, 1992, p.196), while allowing the woman to ventilate feelings regarding her traumatic experiences, might be considered to be modelling the soothing and caring which was missing in the depressed woman's childhood, and therefore both providing "missing input" and equipping the client with adaptive self-management skills. This approach, because it addresses a skill-deficit, should also have some power to prevent relapse in the face of future stress/difficulties.

Another useful therapeutic technique might be to give some education about the after-effects of trauma. As Ehlers & Steil (1995) point out PTSD sufferers often do not make a connection between their experiences of trauma and their resultant symptoms. The lack of such connection is perhaps even more likely in depressed women as a number of their stressful experiences may be in the remote past. Education on the far-reaching effects of early stress/trauma and the normality of their post-traumatic experiences may prevent misinterpretation of their symptoms, and help them to understand their current emotional state and cognitive experiences. A final suggestion derived from the data, which is implicit in the other suggestions, is that therapists always discuss childhood experiences with their depressed clients. As Brewin et al. (1993) note "influential psychological treatments such as cognitive therapy rarely include the assessment of early experience and do not explicitly

incorporate information about early experiences into treatment" (p.82). The data obtained in this study add to the theoretical and research literature which indicates that this is a major oversight which, if addressed, may promote the greater effectiveness of therapeutic interventions for depression.

4.6.1 A final visit to the case study

The data obtained in the study seem to indicate that Helen's depression might be ameliorated by some focused work on her IMs, taking place in the context of a warm empathic relationship. Her unsupportive childhood environment did not promote her learning to talk about and manage her feelings, and her failure to disclose her abusive experience until very recently may have resulted from this skill deficit. The therapeutic relationship would develop her ability to talk about her feelings, and might supply some of the warmth and caring missing from her childhood. It would also provide a model on which Helen could base her "self-soothing" in future times of stress. The direct work on her IMs might promote her enjoyment of her relationship with her boyfriend by preventing flashbacks to her abuse experience, and a successful close relationship would promote continued good functioning by providing a ready source of good social support.

4.7 Suggestions for future research

The data obtained in this study raise some issues for further research. There are some stated concerns regarding the generalisability of the current findings, on grounds of both the size of the groups included in the research, and also the severity of symptomatology exhibited by the depressed sample. These issues could be addressed with a larger sample size, and also by studying women who present with a greater range of symptom severity. This would be a test of the applicability of trauma models to depression generally, whereas the findings of the

current study may only be applicable to severe and/or chronic depression. Future studies should consider comparing groups of women presenting with different levels of depression, to assess the relative applicability of trauma models, and the relative amounts of processing of childhood events which occur at the various levels of severity. Of course these studies should also be undertaken with men, both to assess the generalisability of results, and also to observe any differences in the phenomena between the sexes.

It is suggested that focused studies be undertaken directed at clarifying the role of dissociation in depression, and indeed in other disorders. Dissociation failed to show the pattern of association predicted by its conceptualisation as a coping strategy deployed to keep trauma-related stimuli out of consciousness. It may be that dissociation is not a coping mechanism, and that as yet its nature is not adequately understood. The dual representation theory proposes that inhibition of emotional processing can occur; wherein post-traumatic symptomatology resolves but integration has not been achieved. Examination of the follow-up data obtained here showed that remitted depressed participants still had higher levels of Cognitive Avoidance than controls. This may indicate that the remitted depressed women had not completed the traumatic processing which was ongoing during their depression. The dual representation theory would predict that these women would be prone to relapse in the presence of future stress. It would be a further, and quite stringent, test of the application of trauma models to depression to test whether these women were prone to relapse, and also to map their intrusive, avoidant and depressive symptoms over time in order to further clarify their inter-relationship. A final suggestion is that the content of IMs and in depression and other disorders should be studied. This would allow comparison between disorders, and may provide information regarding what type of experiences render someone vulnerable to depression rather than any other psychological disorder.

Appendix 1

DSM-IV Diagnostic Criteria for Major Depressive Episode

A. Five or more of the following symptoms have been present during the same two-week period and represent a change from previous functioning: at least one of the symptoms is either 1) depressed mood or 2) loss of interest or pleasure.

Note: Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g. feels sad or empty) or observation made by others (e.g. appears tearful). Note: In children and adolescents can be irritable mood.

2. Markedly diminished interest or pleasure in all, or almost all activities most of the day, nearly every day (as indicated by either subjective account or observation made by others).

3. Significant weight loss when not dieting or weight gain (e.g. a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. Note: In children consider failure to make expected weight gains.

4. Insomnia or hypersomnia.

5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).

6. Fatigue of loss of energy nearly every day.

7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).

8. Diminished ability to think or concentrate, indecisiveness nearly every day (either by subjective account or as observed by others).

9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan for committing suicide.

B. The symptoms do not meet criteria for Mixed Episode.

C. The symptoms cause clinically significant distress or impairment in social, occupational or other important areas of functioning.

D. The symptoms are not due to the direct psychological effects of a substance (e.g. drug abuse, a medication) or a general medical condition (e.g. hyperthyroidism).

E. The symptoms are not better accounted for by bereavement, i.e. after the loss of a loved one, the symptoms persist for longer than two months or are characterised by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms or psychomotor retardation.

DSM-IV Diagnostic Criteria for Major Depressive Disorder

A. Presence of a single Major Depressive Episode (Single Major Depressive Episode). Presence of two or more Major Depressive Episodes (recurrent Major Depressive Disorder).

B. The Major Depressive Episode is not better accounted fro by Schizoaffective Disorder and is not superimposed on Schizophrenia, Schizophreniform Disorder, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified.

C. there has never been a Manic Episode, a Mixed Episode or a Hypermanic Episode. Note: This exclusion does not apply if all the manic-like, mixed-like or hypermanic-like episodes are substance or treatment induced or are due to the direct effects of a general medical condition.

Appendix 2

Information for Participants in the Coping with Intrusive Memories Study

Most people experience intrusive memories; these are memories which just come into your mind, without you trying to recall them. Often they are triggered by something around you, like a place, a taste or a smell. When people are depressed these memories are often of unpleasant events which have happened to them. These unpleasant memories can make the depressed person feel worse, and possibly even delay their recovery. This research is concerned with discovering what methods people use to cope with such memories, and how this affects the speed of their recovery. Hopefully this information can be used in the future to help depressed people to recover more quickly.

The Study

I will be recruiting 50 depressed people to take part in the study. I will be asking them to fill in four questionnaires now, and to do this again 3 months from now. In addition, I will ask 20 of these people to fill in a diary of their intrusive memories for 5 days after each assessment.

The Questionnaires

The Beck Depression Inventory - an item which asks about the symptoms of depression.
The Dissociative Events Scale - an item which measures dissociation; the way in which we feel we are connected with our feelings and actions.
The Impact of Events Scale - an item which asks questions about present feelings and memories of upsetting events (you do NOT have to specify what events).
The Coping Responses Inventory - an item which asks about how you try to cope with any upsetting memories.

The Diary

20 participants will be asked to keep a diary of intrusive memories for 5 days following each assessment. Although you may experience more, please record a maximum of three memories per day. For each memory you will be asked to fill in a **very brief** questionnaire; which requests a brief description of the memory, and information regarding approximately how old you were at the time of the memory, whether you felt that it was a positive, neutral or negative memory, whether it had any effect on your mood, and what, if anything triggered the memory.

Your participation in this study is entirely confidential. The results are anonymous and will only be used for research purposes. No distress should be felt during the study, and participation is entirely voluntary. If you would not like to participate, or would like to withdraw **at any point** you may do so without giving a reason.

If you have any questions or problems during completion of the study or afterwards I can be contacted via the following address:

Julie Parker, Psychologist
Long Fox Unit
Weston General Hospital
Weston-Super-Mare
BS23 4TQ
Telephone: (01934) 647069

Thank you very much for giving up your time to participate in this research. Your help is very much appreciated, and I hope that you find the study interesting.

Instructions for Intrusive Memories Questionnaire

An intrusive memory is a memory which comes into your mind without you trying to recall it. They are often triggered by something around you, although sometimes it may seem to have just come to you without there being any link to anything that is happening.

For the next **five days**, I would like you to record some information when you have one of these memories. Although you may have more, please record a maximum of three memories per day. For each memory, please fill in one of the questionnaires which you have been given, the information needed is:

1. Description
A very brief description of the memory. You do not need to include any specific details, just an outline of the situation. For example: " I remember playing with my sister when I was a child" is enough.

2. Age
Your approximate age at the time of the memory. You will be asked whether the event occurred before or after you were 16.

3. Positive/negative/neutral
Whether you consider that the memory is positive (a happy one that you have pleasure in recalling), negative (a sad one) or neutral (not especially happy or sad).

4. Effect
Whether the memory affected your mood, by making you feel happier or more sad than before the memory, or whether it had no effect on your mood.

5. Trigger
If you think that something triggered your memory.

6. Type of trigger
What you think triggered the memory. This may be a person, a place, a sense experience (for example a familiar sound, taste or smell), an activity (for example running may make you remember another experience in which running was involved), the wording that someone is using or even the words of a song. If there is another trigger, which is not on the list, please record what it is.

Thank you for taking part in this study. If there are any problems, please do not hesitate to contact me.

INTRUSIVE MEMORIES

Date: ..... Approx time: .....

Please write a very brief description of the memory: .....

.....

.....

How old were you at the time of the memory?

- Under 16 ☐
- Over 16 ☐

Do you feel that the memory was:

- Positive? ☐
- Negative? ☐
- Neutral? ☐

What effect on your mood did the memory have?

- Lifted mood ☐
- No effect ☐
- Lowered mood ☐

Was the memory triggered by something?

- Yes ☐
- No ☐

IF YES, what triggered the memory?

- Person(s) ☐
- Place ☐
- A sensitive experience *(taste, smell etc)* ☐
- Activity ☐
- Wording ☐
- Other *(please state)* ☐

.....

.....

Participant Information: Clinical Group

Age:

Are you currently employed?

How many years of education have you received?

What is your marital status? Single / Married / Cohabiting / Divorced

Do you have any children?

Are they living with you?

What are their ages?

Do you have any serious physical health problems?

Participant Information: Control Group

Age:

Are you currently employed?

How many years of education have you received?

Are you currently receiving treatment from your GP or from a Mental Health Service for depression? Yes/No

Have you in the past suffered from an episode of clinical depression? Yes/No

Have you in the past received treatment from your GP or from a Mental Health Service for depression? Yes/No

What is your marital status? Single / Married / Cohabiting / Divorced

Do you have any children?

Are they living with you?

What are their ages?

Do you have any serious physical health problems?

The Impact of Events Scale

Below is a list of comments made by people after stressful life events. Please check each item, indicating how frequently these comments were true for you DURING THE PAST SEVEN DAYS. If they did not occur during that time, please mark the 'not at all' column.

	FREQUENCY			
	Not at all	Rarely	Sometimes	Often
1) I thought about an event when I didn't mean to.	☐	☐	☐	☐
2) I avoided letting myself get upset when I thought about an event or I was reminded of it.	☐	☐	☐	☐
3) I tried to remove an event from my memory.	☐	☐	☐	☐
4) I had trouble falling asleep or staying asleep, because of pictures or thoughts about an event that came into my mind.	☐	☐	☐	☐
5) I had waves of strong feelings about an event.	☐	☐	☐	☐
6) I had dreams about an event.	☐	☐	☐	☐
7) I stayed away from reminders of an event	☐	☐	☐	☐
8) I felt as if the event hadn't happened or it wasn't real.	☐	☐	☐	☐
9) I tried not to talk about an event.	☐	☐	☐	☐
10) Pictures about an event popped into my mind.	☐	☐	☐	☐
11) Other things kept making me think about an event.	☐	☐	☐	☐
12) I was aware that I still had a lot of feelings about an event, but I didn't deal with them.	☐	☐	☐	☐
13) I tried not to think about an event.	☐	☐	☐	☐
14) Any reminder brought back feelings about an event.	☐	☐	☐	☐
15) My feelings about an event were 'numb'	☐	☐	☐	☐

BDI®

Date: _____

ame: _____ Marital Status: _____ Age: _____ Sex: _____

ccupation: _____ Education: _____

his questionnaire consists of 21 groups of statements. After reading each group of statements carefully, rcle the number (0, 1, 2 or 3) next to the one statement in each group which **best** describes the way you ve been feeling the **past week, including today.** If several statements within a group seem to apply equally ell, circle each one. **Be sure to read all the statements in each group before making your choice.**

1	0	I do not feel sad.
	1	I feel sad.
	2	I am sad all the time and I can't snap out of it.
	3	I am so sad or unhappy that I can't stand it.
2	0	I am not particularly discouraged about the future.
	1	I feel discouraged about the future.
	2	I feel I have nothing to look forward to.
	3	I feel that the future is hopeless and that things cannot improve.
3	0	I do not feel like a failure.
	1	I feel I have failed more than the average person.
	2	As I look back on my life, all I can see is a lot of failures.
	3	I feel I am a complete failure as a person.
4	0	I get as much satisfaction out of things as I used to.
	1	I don't enjoy things the way I used to.
	2	I don't get real satisfaction out of anything anymore.
	3	I am dissatisfied or bored with everything.
5	0	I don't feel particularly guilty.
	1	I feel guilty a good part of the time.
	2	I feel quite guilty most of the time.
	3	I feel guilty all of the time.
6	0	I don't feel I am being punished.
	1	I feel I may be punished.
	2	I expect to be punished.
	3	I feel I am being punished.
7	0	I don't feel disappointed in myself.
	1	I am disappointed in myself.
	2	I am disgusted with myself.
	3	I hate myself.
8	0	I don't feel I am any worse than anybody else.
	1	I am critical of myself for my weaknesses or mistakes.
	2	I blame myself all the time for my faults.
	3	I blame myself for everything bad that happens.
9	0	I don't have any thoughts of killing myself.
	1	I have thoughts of killing myself, but I would not carry them out.
	2	I would like to kill myself.
	3	I would kill myself if I had the chance.
10	0	I don't cry any more than usual.
	1	I cry more now than I used to.
	2	I cry all the time now.
	3	I used to be able to cry, but now I can't cry even though I want to.
11	0	I am no more irritated now than I ever am.
	1	I get annoyed or irritated more easily than I used to.
	2	I feel irritated all the time now.
	3	I don't get irritated at all by the things that used to irritate me.
12	0	I have not lost interest in other people.
	1	I am less interested in other people than I used to be.
	2	I have lost most of my interest in other people.
	3	I have lost all of my interest in other people.
13	0	I make decisions about as well as I ever could.
	1	I put off making decisions more than I used to.
	2	I have greater difficulty in making decisions than before.
	3	I can't make decisions at all anymore.

_____ Subtotal Page 1

CONTINUED ON BACK

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DES

Eve Bernstein Carlson, Ph.D. & Frank W. Putnam, M.D.

ections: This questionnaire consists of twenty-eight questions about experiences that you may have in your daily life. We are inter-d in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to when you are not under the influence of alcohol or drugs. To answer the questions, please determine to what degree the experi-e described in the question applies to you and circle the number to show what percentage of the time you have the experience.

mple:

0%	10	20	30	40	50	60	70	80	90	100%
(never)										(always)

e_____ Age_____ Sex: M F

Some people have the experience of driving or riding in a car or bus or subway and suddenly realizing that they don't remember what has happened during all or part of the trip. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of finding themselves in a place and having no idea how they got there. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of finding new things among their belongings that they do not remember buying. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes find that they are approached by people who they do not know who call them by another name or insist that they have met them before. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people are told that they sometimes do not recognize friends or family members. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of being accused of lying when they do not think that they have lied. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of looking in a mirror and not recognizing themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of feeling that other people, objects, and the world around them are not real. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Some people have the experience of feeling that their body does not seem to belong to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

4. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

5. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

6. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

7. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

8. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

9. Some people find that they sometimes are able to ignore pain. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

10. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

11. Some people sometimes find that when they are alone they talk out loud to themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

12. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

13. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

14. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have mailed a letter or have just thought about mailing it). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

15. Some people find evidence that they have done things that they do not remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

16. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

17. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

18. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Part 2

Read each item carefully and indicate how often you engaged in that behavior in connection with the problem you described in Part 1. Circle the appropriate response on the answer sheet:

Circle "**N**" if your response is NO, **N**ot at all.	**N** O S F
Circle "**O**" if your response is YES, **O**nce or Twice.	N **O** S F
Circle "**S**" if your response is YES, **S**ometimes.	N O **S** F
Circle "**F**" if your response is YES, **F**airly often.	N O S **F**

There are 48 items in Part 2. Remember to mark all your answers on the answer sheet. Please answer each item as accurately as you can. All your answers are strictly confidential. If you do not wish to answer an item, please circle the number of that item on the answer sheet to indicate that you have decided to skip it. If an item does not apply to you, please write **NA** (**N**ot **A**pplicable) in the box to the right of the number for that item. If you wish to change an answer, make an **X** through your original answer and circle the new answer. Note that answers are numbered across in rows on Part 2 of the answer sheet.

1. Did you think of different ways to deal with the problem?
2. Did you tell yourself things to make yourself feel better?
3. Did you talk with your spouse or other relative about the problem?
4. Did you make a plan of action and follow it?
5. Did you try to forget the whole thing?
6. Did you feel that time would make a difference—that the only thing to do was wait?
7. Did you try to help others deal with a similar problem?
8. Did you take it out on other people when you felt angry or depressed?
9. Did you try to step back from the situation and be more objective?
10. Did you remind yourself how much worse things could be?
11. Did you talk with a friend about the problem?
12. Did you know what had to be done and try hard to make things work?
13. Did you try not to think about the problem?
14. Did you realize that you had no control over the problem?
15. Did you get involved in new activities?
16. Did you take a chance and do something risky?
17. Did you go over in your mind what you would say or do?
18. Did you try to see the good side of the situation?
19. Did you talk with a professional person (e.g., doctor, lawyer, clergy)?
20. Did you decide what you wanted and try hard to get it?

21. Did you daydream or imagine a better time or place than the one you were in?

22. Did you think that the outcome would be decided by fate?

23. Did you try to make new friends?

24. Did you keep away from people in general?

25. Did you try to anticipate how things would turn out?

26. Did you think about how you were much better off than other people with similar problems?

27. Did you seek help from persons or groups with the same type of problem?

28. Did you try at least two different ways to solve the problem?

29. Did you try to put off thinking about the situation, even though you knew you would have to at some point?

30. Did you accept it; nothing could be done?

31. Did you read more often as a source of enjoyment?

32. Did you yell or shout to let off steam?

33. Did you try to find some personal meaning in the situation?

34. Did you try to tell yourself that things would get better?

35. Did you try to find out more about the situation?

36. Did you try to learn to do more things on your own?

37. Did you wish the problem would go away or somehow be over with?

38. Did you expect the worst possible outcome?

39. Did you spend more time in recreational activities?

40. Did you cry to let your feelings out?

41. Did you try to anticipate the new demands that would be placed on you?

42. Did you think about how this event could change your life in a positive way?

43. Did you pray for guidance and/or strength?

44. Did you take things a day at a time, one step at a time?

45. Did you try to deny how serious the problem really was?

46. Did you lose hope that things would ever be the same?

47. Did you turn to work or other activities to help you manage things?

48. Did you do something that you didn't think would work, but at least you were doing something?

Appendix 2 (continued)

Development of the CRI:

A very large amount of normative data was collected; the analysis of which resulted in the final 48-item version used in the present study (Moos, 1993). This final version has been used in field trials with samples of depressed patients, alcoholics, medical patients and with normal controls. Correlations between the final and previous versions are high, indicating that the findings of research carried out with previous versions are probably applicable to findings obtained from the final version (Moos, 1993). The sub-scales are moderately inter-correlated; with higher correlations between the approach scales than between the avoidance scales. This reflects the fact that people tend to use more than one type of coping response, and the fact that in response to more pervasive and severe stressors people tend to employ more coping of all types. The scales have been shown to be moderately stable over a 12-month period.

The validity and reliability of the DES:

The DES has proved to be highly internally reliable, and to have very good test-retest reliability (Bernstein & Putnam, 1986; Pitbaldo & Sanders, 1991). Test-retest reliability has been assessed over periods up to 8 weeks (Pitbaldo & Sanders, 1991), the significance of the correlation obtained ($p.<.000$), indicates that either dissociative psychopathology is highly stable over such periods or that the DES is not sensitive to the amount of clinical change likely to occur in this time period. Thus the DES has been established as a highly valid and reliable tool for the quantification of dissociation. Various scores on the DES have been found to be associated with different dissociative disorders; research indicates that scores above 30 are strongly indicative of dissociative disorder and that scores above 40 are strongly indicative of multiple personality disorder (Chu & Dill, 1990; Quimby & Putnam, 1991;

Ross, Norton & Anderson, 1988). The most recent advice of the authors (Carlson & Putnam, 1993) is that scores over 30 are strongly indicative of dissociative disorder or PTSD, although another study has found that DES scores between 15 and 20 are most sensitive and specific for screening for dissociative disorders (Steinberg et al., 1991).

Appendix 3

WESTON LOCAL RESEARCH ETHICS COMMITTEE

Weston Area Health Trust
Weston General Hospital
Grange Road
Uphill
Weston Super Mare
Avon
BS23 4TQ

Direct Dial: 01934 647092
Internal Ext: 3092

18 April 1996

Ms J Parker
13A Archfield Road
Cotham
Bristol
Avon

Dear Ms Parker

E.54 COPING WITH INTRUSIVE MEMORIES IN DEPRESSION

I understand Sister Kirkwood contacted you to clarify a few issues. I am pleased to advise you that the above study has been approved by the Research Ethics Committee under Category C.

Yours sincerely

Julia Summers (Miss)
Secretary, Research Ethics Committee

U B H T
TEACHING CARE

Trust Headquarters
Marlborough Street
Bristol BS1 3NU
Fax 0117 925 6588

04 June 1996

Please ring direct line number:
0117 928 361

Ms J Parker
Trainee Clinical Psychologist
13, Archfield Road
Cotham
Bristol
BS6 6BD

Dear Ms Parker

E3492 **Coping with intrusive memories in depressed women**

I am pleased to advise that the above project and relevant correspondence was considered by the Research Ethics Committee at their meeting held on 31 May 1996 and approval given under Category C.

The committee require you to complete the attached end of study summary/yearly report and return it to this office.

Yours sincerely

N. Nathoo

Naaz Nathoo (Mrs)
Secretary to the Research Ethics Committee

Frenchay Healthcare Trust

Headquarters, Beckspool Road, Frenchay, Bristol BS16 1ND.
Telephone: (0117) 970 1070 Fax: (0117) 975 3806

Approved but see below ☑

Approval withheld subject to amendment, see below ☐

Approval not given ☐

27 September 1996

Our ref: chapp96.67

Tel Ext 3507

Ms J Parker
13a Archfield Road
Cotham
Bristol
BS6 6BD

Dear Ms Parker

Project No. 96/67 Coping with intrusive memories in depressed women

I am pleased to confirm the approval of Dr D Rogers, Chairman of the Avon Health Authority, Frenchay Healthcare NHS Trust Research Ethics Committee in respect of the above project, in as far as ethics matters are concerned. This approval will be subject to ratification by the Committee at the next meeting which is scheduled for the 15 October 1996. Unless there are any significant issues raised by the other Members concerning the project, I shall not need to write to you again.

When the project is completed it would be appreciated by the Committee if you could advise them accordingly and, should the results be published, they would like to receive a copy for information and for the benefit of any future research that may be undertaken in this field.

The Chief Executive has requested that the Clinical Directors be advised of all research being undertaken within their Directorate to ensure that there are no operational implications affecting their departments and for their interest and information. May I ask you as a matter of courtesy to advise any relevant Clinical Directors of the arrangements you are making if you are undertaking your research within their departments. All Clinical Directors know that they can obtain a copy of projects being undertaken in the Trust from my office.

I should also like to point out that if your project involves the use of drugs, it is necessary for you to notify and discuss the implications with the senior pharmacist in the hospital in which your research is being carried out and to ensure he is given :

(a) a copy of the protocol
(b) a copy of the randomisation schedule, and
(c) plans for the receipt, storage and issue of the drugs you will be using (i.e where, how, etc.,) -it is incorrect to assume that the pharmacy will automatically store and issue trial medicines.

If the clinical trial involves pathological or radiological investigations other than those which are being undertaken as part of normal patient care, please arrange this with the appropriate consultant before the trial commences.

Data Protection Act 1984 : If the project involves computerising data about patients and/or volunteers who come within the Trust's area of responsibility it is essential that you contact the Project Officer, Miss A J Cooke, Information Systems Department, c/o Ward 27, Frenchay Hospital, Frenchay Park Road, Bristol, BS16 1LE, telephone No. (0117) 9701212 on extension 2620.

Yours sincerely

Mrs K M Matthews
Secretary to the Research Ethics Committee

cc Dr D Rogers, Chairman REC

Appendix 4

Instructions

I would like you to sort the memories into **specific** and **general** categories. Sort the descriptions into piles of general and specific memories. Then please record the codes/numbers written on the back of each memory onto the recording sheet provided.

Definitions

A **general memory** is a description which seems to refer to a **category of experiences**.
An example of a general memory might be "When I am playing squash" or "We used to go for walks on the Common sometimes after lunch on a Sunday".

A **specific memory** is a description that seem to refer to **one particular incident** in the person's life history.
An example of a specific memory might be "When I beat my policeman friend at squash 3 weeks ago" or "When I dropped something and my flatmate got annoyed".

NB Examples are taken from Williams (1994).

References:

Abramson, L.Y., Seligman, M.E.P. & Teasdale, J.D. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Akiskal, H.S. (1982). Factors associated with incomplete recovery in primary depressive illness. Journal of Clinical Psychiatry, 43, 266-271.

Angst, J. (1988). Clinical course of affective disorders. In T. Hegalsen & R.J. Daly (Eds.) Depressive Illness: Prediction of Course and Outcome. Berlin: Springer-Verlag.

Arieti, S. & Bemporad, J. (1980). Severe and Mild Depression: The Psychotherapeutic Approach. London: Tavistock.

Bandura, A. (1977). Social Learning Theory. Englewood Cliffs, NJ: Prentice-Hall.

Barker, C., Pistrang, N., Shapiro, D.A. & Shaw, I. (1990). Coping and help seeking in the UK adult population. British Journal of Clinical Psychology, 29, 271-285.

Baum, A. (1987). Toxins, technology and natural disasters. In G.R. Van den Bos & B.K. Bryant (Eds.) Cataclyzms, Crises and Catastrophes: Psychology in Action. Washington, DC: APA.

Baum, A. (1990). Stress, intrusive imagery and chronic distress. Health Psychology, 9, 653-675.

Baum, A., Cohen, L. & Hall, M. (1993). Control and intrusive memories as possible determinants of chronic stress. Psychosomatic Medicine, 55, 274-286.

Beck, A.T. (1972). Depression: Causes and Treatment. Philadelphia: University of Pennsylvania Press.

Beck, A.T. (1976). Cognitive Therapy and the Emotional Disorders. New York: Wiley.

Beck, A.T., Rush, A.J., Shaw, B.F. & Emery, G. (1979). Cognitive Therapy of Depression. New York: Wiley.

Beck, A.T. & Steer, R.A. (1987). Beck Depression Inventory Manual. New York: Harcourt Brace Jovanovich Inc.

Beck,, A.T., Ward, C.H., Mendelson, M., Mock, J.E. & Erbaugh, J.K. (1962). Reliability of psychiatric diagnosis: II. A study of the consistency of clinical judgements and ratings. American Journal of Psychiatry, 119, 351-357.

Bernstein, & Putnam, F.W. (1986) Development, reliability and validity of a dissociation scale. Journal of Nervous and Mental Disease, 147, 727-735.

Berntsen, D. Involuntary autobiographical memories. Applied Cognitive Psychology, 10, 408.1-20.

Billings, A., Cronkite, R. & Moos, R. (1983). Social-environmental factors in unipolar depression: Comparisons of depressed patients and non-depressed controls. Journal of Abnormal Psychology, 92, 119-133.

Billings, A. & Moos, R. (1981). The role of coping responses and social resources in attenuating the stress of life events. Journal of Behavioral Medicine, 4, 139-157.

Billings, A. & Moos, R. (1982). Family environments and adaptation: A clinically-applicable typology. American Journal of Family Therapy, 10, 26-38.

Billings, A.G. & Moos, R.H. (1984). Coping, stress and social resources among adults with unipolar depression. Journal of Personality and Social Psychology, 46, (4), 877-891.

Billings, A.G. & Moos, R.H. (1985a). Psychosocial processes of remission in unipolar depression: Comparing depressed patients with matched community controls. Journal of Consulting and Clinical Psychology, 53, 314-325.

Billings, A.G. & Moos, R.H. (1985b). Life stressors and social resources affect posttreatment outcomes among depressed patients. Journal of Abnormal Psychology, 94, 140-153.

Birtchnell, J. (1988). Defining dependence. British Journal of Medical Psychology, 61, 111-124.

Blehar, M.C., Weissman, M.M., Gershon, E.S. & Hirschfield, R.M.A. (!988) Family and genetic studies of affective disorders. Archives of General Psychiatry, 45, 289-292.

Bowlby, J. (1969). Attachment: Attachment and Loss, Vol. 1. London: Hogarth Press.

Bowlby, J. (1973). Separation, Anxiety and Anger. Attachment and Loss, Vol. 2. London: Hogarth Press.

Bowlby, J. (1980). Loss: Sadness and Depression. Attachment and Loss Vol. 3. London: Hogarth Press.

Breslau, N., Davis, G.C., Andreski, P. & Peterson, E. (1991). Traumatic events and posttraumatic stress disorder in an urban population of young adults. Archives of General Psychiatry, 48, 216-222.

Breslau, N. & Davis, G.C. (1986). Chronic stress and major depression. Archives of General Psychiatry, 43, 309-314.

Brewin, C.R. (1989). Cognitive Foundations of Clinical Psychology. Hillsdale, NJ: Erlbaum.

Brewin, C.R., Andrews, B. & Gotlib, I.H. (1993). Psychopathology and early experience: a reappraisal of retrospective reports. Psychological Bulletin, 113, 82-98.

Brewin, Dalgliesh & Joseph (1996). A dual representation theory of post-traumatic stress disorder. Psychological Review, 103, 670-686.

Briere, J.N. (1992). Child Abuse Trauma: Theory and Treatment of the Lasting Effects. Sage Publications: London.

Brittlebank, A.D., Scott, J., Williams, J.M.G. & Ferrier, I.N. (1993). Autobiographical memory in depression: State or trait marker? British Journal of Psychiatry, 162, 118-121.

Brockington, I.F. & Wainwright, R.S. (1980). Depressed patients with schizophrenic or paranoid symptoms. Psychological Medicine, 10, 665-675.

Brom, D. & Witztum, E. (1992). Recent trauma in psychiatric outpatients. American Journal of Orthopsychiatry, 62, 545-551.

Brown, G.W. & Harris, T.O. (1978). Social Origins of Depression. London: Free Press.

Brown, G.W., Harris, T.O., Hepworth, C. & Robinson, R. (1994). Clinical and psychosocial origins of chronic depressive episodes, part 2: A patient enquiry. British Journal of Psychiatry, 165, 457-465.

Brown, G.W. & Moran, P. (1994). Clinical and psychosocial origins of chronic depressive episodes, part 1: A community survey. British Journal of Psychiatry, 165, 447-456.

Bryman, A. & Cramer, D. (1990). Quantitative Data Analysis for Social Sciences (Revised Edition). London: Routledge.

Caplan, R.D., Vinokur, A.D., Price, R.H. & Van Ryn, M. (1989). Job seeking, reemployment and mental health: A randomized field experiment in coping with job loss. Journal of Applied Psychology, 74, 759-769.

Carlson, E.B., Putnam, F.W., Ross, C.A., Torem, M., Coons, P., Dill, D.L., Loewenstein, R.J. & Braun, B.G. (1993). Validity of the Dissociative Experiences Scale in screening for multiple personality disorder: A mulitcenter study. American Journal of Psychiatry, 150, 1030-1036.

Carlson, E.B. & Putnam, F.W. (1993). An update on the Dissociative Experiences Scale. Dissociation, 6, 16-25.

Cassano, G.B., Akiskal, H.S., Musetti, L., Perugi, G., Soriani, A. & Mignani, V. (1989). Psychopathology, temperament and past course in primary major depressions. Psychopathology, 22, 278-288.

Chu, J.A. & Dill, D.L. (1990) Dissociation in relation to childhood physical and sexual abuse. American Journal of Psychiatry, 147, 887-892.

Clayton, P.J. (1984, April). Overview of Recurrent Mood Disorders: Definitions and Natural Course. Paper presented at the National Institute of Mental Health Consensus Development Conference, Washington, DC.

Clayton, P.J.; Guze, S.B. Cloninger, C.R. & Martin, R.L. (1992). Unipolar depression: Diagnostic inconsistency and its implications. Journal of Affective Disorders, 26, 111-116.

Cohen, F. (1987). Measurement of coping. In S.V. Kasl and C.L. Cooper (Eds.) Stress and Health: Issues in Research Methodology. John Wiley & Sons Ltd.

Conway, M.A. (in press). Autobiographical knowledge and autobiographical memories. In D.C. Rubin (Ed.) The Construction of Autobiographical Memories. Cambridge: CUP.

Coons, P.M., Bowman, E.S. & Milstein, V. (1988). Multiple personality disorder: A clinical investigation of 50 cases. Journal of Nervous and Mental Disease, 176, 519-527.

Coons, P.M., Bowman, E., Pellow, T.A. & Schneider, P. (1989). Post-traumatic aspects of the treatment of victims of sexual abuse and incest. Psychiatric Clinics of North America, 12, 325-335.

Coryell, W., Endicott, J. & Keller, M. (1991) Predictors of relapse into major depressive disorder in a nonclinical population. American Journal of Psychiatry, 148, 1353-1358.

Coyne, J. Aldwin, C. & Lazarus, R.S. (1981). Depression and coping in stressful episodes. Journal of Abnormal Psychology, 90, 439-447.

Dalgliesh, T. & Watts, F.N. (1990). Biases of attention and memory in disorders of anxiety and depression. Clinical Psychology Review, 10, 589-604.

Davidson, J.R.T. & Foa, E.B. (1991). Diagnostic issues in posttraumatic stress disorder: Considerations for the DSM-IV. Journal of Abnormal Psychology, 100, 346-355.

Diekhoff, G.M. (1991). A guide to computing with SPSS-PC+ and SPSS-X. Iowa: W.C. Brown Publishers.

Dobson, K.S. & Shaw, B.F. (1987). Specificity and stability of self-referent encoding in clinical depression. Journal of Abnormal Psychology, 96, 34-40.

Draijer, N. & Boon, S. (1993). The validation of the Dissociative Experiences Scale against the criterion of the SCID-D, using Receiver Operating Characteristics (ROC) analysis. Dissociation, 6, 28-37.

Dunn, G.E., Paolo, A.M., Ryan, J.J. & Van Fleet, J. (1993). Dissociative symptoms in a substance abuse population. American Journal of Psychiatry, 150, 1043-1047.

Eberly, R.E., Harkness, A.R. & Engdahl, B.E. (1991). An adaptational view of trauma response as illustrated by the prisoner of war experience. Journal of Traumatic Stress, 4, 363-380.

Egeland, J.A. & Hostetter, A.M. (1983). Amish study: I. Affective disorders among the Amish, 1976-1980. American Journal of Psychiatry, 140, 56-61.

Ehlers, A. & Steil, R. (1995). Maintenance of intrusive memories in posttraumatic stress disorder: a cognitive approach. Behavioural and Cognitive Psychotherapy, 23, 217-249.

Epstein, S. (1994). Integration of the cognitive and the psychodynamic unconscious. American Psychologist, 49, 709-724.

Evans, J., Williams, J.M.G., O'Loughlin, S. & Howells, K. (1992). Autobiographical memory and problem-solving strategies of parasuicide patients. Psychological Medicine, 22, 399-405.

Eysenck, M.W. & Keane, T.M. (1990). Cognitive Psychology. Hove, U.K.: Erlbaum.

Ferster, C.B. (1973). A functional analysis of depression. American Psychologist, 28, 857-870.

Ferster, C.B. (1974). Behavioral approaches to depression. In R.J. Friedman & M.M. Katz (Eds.), The Psychology of Depression: Contemporary Theory and Research. New York: Winston-Wiley.

Foa, E.B., Steketee, G. & Rothbaum, B.O. (1989). Behavioral/cognitive conceptualizations of post-traumatic stress disorder. Behavior Therapy, 20, 155-176.

Foa, E.B., Zinbarg, R. & Rothbaum, B.O. (1992). Uncontrollability and unpredictability in post-traumatic stress disorder: an animal model. Psychological Bulletin, 112, 218-238.

Folkman, S. & Lazarus, R.S. (1980). An analysis of coping in a middle-aged community sample. Journal of Health and Social Behavior, 21, 219-239.

Folkman, S. & Lazarus, R.S. (1986). Stress processes and depressive symptomatology. Journal of Abnormal Psychology, 95, 107-113.

Fondacaro, M. & Moos, R. (1987). Social support and coping: A longitudinal analysis. American Journal of Community Psychology, 15, 653-673.

Fondacaro, M. & Moos, R. (1989). Life stressors and coping: A longitudinal analysis among depressed and nondepressed adults. Journal of Community Psychology, 17, 330-340.

Fox, E. (1993). Allocation of visual attention and anxiety. Cognition and Emotion, 7, 207-215.

Foy, D.W., Resnick, H.S., Sipprelle, R.C. & Carroll, E.M. (1987). Premilitary, military and postmilitary factors in the development of combat-related stress disorders. The Behavior Therapist, 10, 3-9.

Frank,, E. & Anderson, B.P. (1987). Psychiatric disorders in rape victims: Past history and current symptomatology. Comprehensive Psychiatry, 28, 77-82.

Freud, S. (1975/1920). Beyond the pleasure principle. In The Standard Edition of the Complete Psychological works of Sigmund Freud, vol. 18, (pp.7-67). London: Hogarth press.

Frischolz, E.J., Braun, B.G., Sachs, R.G., Schwartz, D.R., Lewis, J., Schaeffer, D., Westergaard, C. & Pasquotto, J. (1991). Construct validity of the Dissociative Experiences Scale (DES): I. The relationship between the DES and other self-report measures of dissociation. Dissociation, 4, 185-188.

Gerlsma, C., Kramer, J., Scholing, A. & Emmelkamp, P. (1994). The influence of mood on memories of parental rearing practices. British Journal of Clinical Psychology, 33, 159-172.

Gilbert, P. (1989). Human Nature and Suffering. Hove, U.K.: Erlbaum.

Gilbert, P. (1992). Depression: The Evolution of Powerlessness. Hove UK.: Erlbaum.

Goldin, L.R. & Gershon, E.S. (1988). The genetic epidemiology of major depressive illness. In A.J. Frances & R.E. Hales (Eds.), Review of Psychiatry. (vol. 7. pp.149-167). Washington, DC: American Psychiatric Press.

Gotlib, I.H. & Hammen, C.L. (1992). Symptomatology, diagnostic criteria, and epidemiology of depression. In Psychological Aspects of Depression. Wiley: Chichester, England.

Greaves, D.H. (1996). The sociocognitive model of dissociative identity disorder: A re-examination of the evidence. Psychological Bulletin, 120, 42-59.

Hammen, C.L. (1980). Depression in college students: Beyond the Beck Depression Inventory. Journal of Consulting and Clinical Psychology, 48, 126-128.

Hammen, C., Ellicott, A., Gitlin, M. & Jamison, K.R. (1989). Sociotropy/autonomy and vulnerability to specific life events in unipolar and bipolar patients. Journal of Abnormal Psychology, 98, 154-160.

Hammen, C., Davila, J., Brown, G., Ellicott, A. & Gitlin, M. (1992). Psychiatric history and stress: Predictors of the severity of unipolar depression. Journal of Abnormal Psychology, 101, 45-52.

Hashtroudi, S. Johnson, M.K., Vnek, N. & Ferguson, S.A. (1994). Aging and the effects of affective and factual focus on source monitoring and recall. Psychology and Aging, 9, 160-170.

Herman, J.L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. Journal of Traumatic Stress, 5, 377-391.

Hierholzer, R., Munson, J., Peabody, C. & Rosenberg, J. (1992). Clinical presentations of PTSD in World War II combat veterans. Hospital and Community Psychiatry, 43, 816-820.

Hirschfield, R.M. & Cross, C.K. (1982). Epidemiology of affective disorders: Psychosocial risk factors. Archives of General Psychiatry, 39, 35-46.

Holahan, C.J. & Moos, R.H. (1987). The personal and contextual determinants of coping strategies. Journal of Personality and Social Psychology, 52, 946-955.

Horowtiz, M.J. (1986). Stress Response Syndromes. New York: Jason Aronson.

Horowitz, M.J., Wilner, N. & Alvarez, W. (1979). Impact of event scale: a measure of subjective stress. Psychosomatic Medicine, 41, 209-218.

Howell, C.D. (1982). Statistical Methods for Psychology (2nd Edition). Boston: PWS-Kent.

Imber, S.D., Pilkonis, P.A., Sotsky, S.M., Elkin, I., Watkins, J.T., Collins, J.F., Shea, T.M., Leber, W.R. & Glass, D.R. (1990). Mode-specific effects among three treatments of depression. Journal of Consulting and Clinical Psychology, 58, 352-359.

Ingram, R.E. (1984). Toward an information-processing analysis of depression. Cognitive Therapy and Research, 8, 443-478.

Jacobs, W.J. & Nadel, L. (1985). Stress-induced recovery of fears and phobias. Psychological Review, 92, 512-531.

Janoff-Bulman, R. (1985). The aftermath of victimization: Rebuilding shattered assumptions. In C.R. Figley (Ed.) Trauma and its Wake: The study and treatment of post-traumatic stress disorder. (pp. 15-35). New York: Bruner/Mazel/

Janoff-Bulman, R. (1992). Shattered Assumptions: Towards a new psychology of trauma. New York: Free Press.

Jones, J.C. & Barlow, D.H. (1990). The etiology of posttraumatic stress disorder. Clinical Psychology Review, 10, 299-328.

Joseph, S., Yule, W. & Williams, R. (1993). Post-traumatic stress: attributional aspects. Journal of Traumatic Stress, 6, 501-513.

Joseph, S.A., Williams, R., Yule, W. & Walker, A. (1992). Factor analysis of the impact of event scale with survivors of two disasters at sea. Personality and Individual Differences, 13, 693-697.

Joseph, S., Yule, W. & Williams, R. (1994). The Herald of Free Enterprise disaster: The relationship of intrusion and avoidance to subsequent depression and anxiety. Behaviour Research and Therapy, 32, 115-117.

Karasu, T.B. (1990). Toward a clinical model of psychotherapy for depression 1: Systematic comparison of three psychotherapies. American Journal of Psychiatry, 59, 221-234.

Keller, M.B. (1988). Diagnostic issues and clinical course of unipolar illness. In A.J. Frances & R.E. Hales (Eds.) Review of Psychiatry. (pp. 188-212). Washington, DC: American Psychiatric Press.

Keller, M.B., Lavori, P.W., Endicott, J., Coryell, W. & Klerman, G.L. (1983). Double depression: Two year follow-up. American Journal of Psychiatry, 140, 689-694.

Keller, M.B., Lavori, P.W., Rice, J., Coryell, W. & Hirschfield, R.M.A. (1986). the persistent risk of chronicity in recurrent episodes of nonbipolar major depressive disorder: A prospective follow-up. American Journal of Psychiatry, 143, 24-28.

Keller, M.B., Shapiro, R.W., Lavori, P.W. & Wolfe, N. (1982). Recovery in major depressive disorder: Analysis with the life table and regression models. Archives of General Psychiatry, 39, 905-910.

Kendall, P.C., Hollon, S.D., Beck, A.T., Hammen, C.L. & Ingram, R.E. (1987). Issues and recommendations regarding the use of the Beck Depression Inventory. Cognitive Therapy and Research, 11, 289-299.

Kessler, R.C. & Magee, W.J. (1993). Childhood adversities and adult depression: Basic patterns of association in a US national survey. Psychological Medicine, 23, 679-690.

Kiloh, L.G., Andrews, G. & Neilson, M. (1988). The long-term outcome of depressive illness. British Journal of Psychiatry, 153, 752-757.

Kilpatrick, D.G. & Resnick, H.S. (1993). Post-traumatic stress disorder in response to criminal victimization in clinical and community populations. In J.R.T. Davidson and E.B. Foa (Eds.) Post-traumatic Stress Disorder, DSM-IV and Beyond. (pp. 113-143). Washington DC: American Psychiatric Press.

Klein, M. (1957/1975). Envy and Gratitude and Other Works (1946-1963). London: Hogarth Press.

Kluft, R.P. (1984). Treatment of multiple personality disorder: A study of 33 cases. Psychiatric Clinics of North America, 7, 69-83.

Kohut, H. (1971). The Analysis of the Self. New York: International Universities Press.

Kumar, R. & Brockington, I.F. (1988). Motherhood and Mental Illness, Vol. 2: Causes and Consequences. London: Wright.

Kuyken, W. & Dalgliesh, T. (1995). Autobiographical memory and depression. British Journal of Clinical Psychology, 34, 89-92.

Kuyken, W. & Brewin, C.R. (1994a). Intrusive memories of childhood abuse during depressive episodes. Behaviour Research and Therapy, 32, 525-528.

Kuyken, W. & Brewin, C.R. (1994b). Stress and coping in depressed women. Cognitive Therapy and Research, 18, 403-412.

Lazarus, R.S. & Folkman, S. (1984) Stress, Appraisal and Coping. New York: Springer.

Lee, A.S. & Murray, R.M. (1988). The long-term outcome of Maudsley depressives. British Journal of Psychiatry, 153, 741-751.

Lewisohn, P.M., Steinmetz, J.L., Larson, D.W. & Franklin, J. (1981). Depression related cognitions: Antecedent or consequence? Journal of Abnormal Psychology, 90, 213-219.

Lewisohn, P.M., Fenn, D.S., Stanton, A.K. & Franklin, J. (1986). Relation of age at onset to duration of episode in unipolar depression. Journal of Psychology and Aging, 1, 63-68.

Lewisohn, P.M. & Rosenbaum, M. (1987). Recall of parental behaviour by acute depressives, remitted depressives and nondepressives. Journal of Personality and Social Psychology, 52, 611-619.

Lightfoot, S.L. & Oliver, J.M. (1985). The Beck Depression Inventory: Psychometric properties in university students. Journal of Personality Assessment, 49, 434-436.

Lloyd, G.G. & Lishman, W.A. (1975). Effects of depression on speed of recall of pleasant and unpleasant experiences. Psychological Medicine, 5, 173-180.

Lyness, J.M., Caine, E.D., Conwell, Y., King, D. & Cox, C. (1993). Depressive symptoms, medical illness, and functional status in depressed psychiatric inpatients. American Journal of Psychiatry, 150, 910-915.

McCullough, J.P., Braith, J.A., Chapman, R.C., Kasnetz, M.D., Carr, K.F., Cones, J.H., Fielo, J., Shoemaker, O.S. & Roberts, W.C. (1990). Comparison of early and late onset dysthymia. Journal of Nervous and Mental Disease, 178, 577-580.

McDowall, J. (1984). Recall of pleasant and unpleasant words in depressed subjects. Journal of Abnormal Psychology, 93, 401-407.

McFarlane, A.C. (1988). The phenomenology of posttraumatic stress disorders following a natural disaster. Journal of Nervous and Mental Disease, 176, 22-29.

McFarlane, A.C. (1991). PTSD. International Review of Psychiatry, 3, 203-213.

McFarlane, A.C. (1992). Avoidance and intrusion in posttraumatic stress disorder. Journal of Nervous and Mental Disease, 180, 439-445.

McKenzie, C.D. & Wright, L.S. (1996). Delayed Posttraumatic Stress Disorders From Infancy: The two trauma mechanism. Amsterdam: Harwood Academic Publishers.

McNally, R.J. (1992). Psychopathology of post-traumatic stress disorder (PTSD): Boundaries of the syndrome. In M. Basoglu (Ed.). Torture and its Consequences: Current treatment approaches (pp.229-252). Cambridge, U.K.: Cambridge University Press.

McNally, R.J., English, G.E. & Lipke, H.J. (1993). Assessment of intrusive cognition in PTSD: Use of the modified Stroop paradigm. Journal of Traumatic Stress, 6, 33-41.

McNally, R.J., Litz, B.T., Prassas, A., Shin, L.M. & Weathers, F.W. (1994). Emotional priming of autobiographical memory in post-traumatic stress disorder. Cognition and Emotion, 8, 351-367.

McNaughton, M.E., Patterson, T.L., Irwin, M.R. & Grant, I. (1992) The relationship of life adversity, social support and coping to hospitalization with major depression. Journal of Nervous and Mental Disease, 180, 491-497.

Malt, U. (1988). The long-term psychiatric consequences of accidental injury. British Journal of Psychiatry, 153, 810-818.

Mikulincer, M. & Solomon, Z. (1988). Attributional style and combat-related posttraumatic stress disorder. Journal of Abnormal Psychology, 97, 308-313.

Moos, R.H. (1993). Coping Responses Inventory. Psychological Assessment Resources Inc.: Florida.

Moos, R., Brennan,P., Fondacaro, M. & Moos, B. (1990). Approach and avoidance coping responses among older problem and nonproblem drinkers. Psychology and Aging, 5, 31-40.

Moos, R. & Swindle, R. (1990). Stressful life circumstances: Concepts and measures. Stress Medicine, 6, 171-178.

Morgan, I.A., Matthews, G. & Winton, M. (1995). Coping and personality as predictors of post-traumatic intrusions, numbing, avoidance and general distress: A study of the victims of the Perth flood. Behavioural and Cognitive Psychotherapy, 23, 251-264.

Myers, L.B. & Brewin, C.R. (1994). Recall of early experience and the repressive coping style. Journal of Abnormal Psychology, 103, 288-292.

Myers, L.B. & Brewin, C.R. (1995). Repressive coping and the recall of emotional material. Cognition and Emotion, 9, 637-642.

Myers, L.B. & Brewin, C.R. (in press). Illusions of well-being and the repressive coping style. British Journal of Social Psychology.

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. Psychological Bulletin, 101, 259-282.

North, C.S., Smith, E.M., McCool, R.E. & Lightcap, P.E. (1989). Acute post-disaster coping and adjustment. Journal of Traumatic Stress, 2, 353-360.

Oatley, K. & Boulton, W. (1985). A social theory of depression in reaction to life events. Psychological Review, 92, 372-388.

Palinkas, L.A. & Browner, D. (1995). Effects of prolonged isolation in extreme environments on stress, coping and depression. Journal of Applied Social Psychology, 25, 557-576.

Parker, G.B. & Brown, L.B. (1982). Coping behaviors that mediate between life events and depression. Archives of General Psychiatry, 39, 1386-1391.

Parker, G. (1983). Parental " affectionless control" as an antecedent to adult depression: A risk factor defined. Archives of General Psychiatry, 40, 956-960.

Paykel, E.S. (1991). Depression in women. British Journal of Psychiatry, 188, Supplement 10, 22-29.

Pennebaker, J.W., Kiecolt-Glaser, J.K. & Glaser, R. (1988). Disclosure of traumas and immune function: Health implications for psychotherapy. Journal of Consulting and Clinical Psychology, 56, 239-245.

Pitbaldo, C.B. & Sanders, B. (1991). Reliability and short-term stability of score on the Dissociative Experiences Scale. In B.G. Braun & E.B. Carlson (Eds.), Proceedings of the Eighth International Conference on Multiple Personality and Dissociative States. Chicago: Rush.

Putnam, F.W. (1989). Diagnosis and Treatment of Multiple Personality Disorder. New York: Guilford.

Quimby, L.G. & Putnam, F.W. (1991). Dissociative symptoms and aggression in a state mental hospital. Dissociation, 4, 21-24.

Rapaport, D. (1971/1942). Emotions and Memory. New York: International Univeristies Press.

Rohde, P., Lewisohn, P.M. & Seeley, J.R. (1990). Are people changed by the experience of having an episode of depression? A further test of the scar hypothesis. Journal of Abnormal Psychology, 99, 264-271.

Rohde, P., Lewisohn, P.M., Tilson, M. & Seeley, J.R. (1990) Dimensionality of coping and its relation to depression. Journal of Personality and Social Psychology, 58, 499-511.

Ross, A. (1991). Growth without progress. Contemporary Psychology, 36, 743-744.

Roth, S. & Cohen, L. (1986). Approach, avoidance and coping with stress. American Psychologist, 41, 813-819.

Rothbaum, B.O. & Foa, E.B. (1993). Subtypes of post-traumatic stress disorder and duration of symptoms. In J.R.T. Davidson and E.B. Foa (Eds.) Post-traumatic Stress Disorder. DSM-IV and Beyond. (pp. 23-35). Washington DC: American Psychiatric Press.

Saxe, G.N., van der Kolk, B.A., Berkowitz, R., Chinman, G., Hall, K., Lieberg, G. & Schwartz, J. (1993). Dissociative disorders in psychiatric inpatients. American Journal of Psychiatry, 150, 1037-1042.

Schneck, H. (1986). Schizophrenic focus changes to dramatic changes in the brain. New York Times, Science Times. March 18, 1986. Cited in McKenzie & Wright (1996; p.51).

Schulberg, H.C., McClelland, M. & Burns, B.J. (1987). Depression and physical illness: The prevalence, causation and diagnosis of comorbidity. Clinical Psychology Review, 7, 145-167.

Schwarz, R.A. & Prout, M.F. (1991). Integrative approaches in the treatment of PTSD. Psychotherapy, 28, 364-373.

Schwarzwald, J., Solomon, Z., Weisenberg, M. & Mikulincer, M. (1987). Validation of the Impact of Events Scale for psychological sequelae of combat. Journal of Consulting and Clinical Psychology, 55, 251-256.

Seligman, M.E.P., Abramson, L.Y., Semmel, A. & Baeyer, C.V. (1979). Depressive attributional style. Journal of Abnormal Psychology, 88, 242-247.

Shaw, B.L. (1987). Sexual value-behavior congruence or discrepancy: Coping of the single adult Mormon. (Doctoral dissertation, United States International University, San Diego, CA). Dissertation Abstracts International, 48, 1802B.

Sherbourne, C.D. & Hays, R.D. (1990). Marital, status, social support and health transitions in chronic disease patients. Journal of Health and Social Behavior, 31, 328-343.

Sherbourne, C.D., Hays, R.D. & Wells, K.B. (1995). Personal and psychosocial risk factors for physical and mental health outcomes and course of depression among depressed patients. Journal of Consulting and Clinical Psychology, 63, 345-355.

Sherbourne, C.D. & Stewart, A.L. (1991). The MOS Social Support Survey. Social Science Medicine, 32, 705-714.

Silver, R.L., Boon, C. & Stones, M.H. (1983). Searching for the meaning in misfortune: Making sense of incest. Journal of Social Issues, 39, 81-102.

Simons, A.D., Garfield, S.L. & Murphy, G.E. (1984). The process of change in cognitive therapy and pharmacotherapy for depression: Changes in mood and cognition. Archives of General Psychiatry, 41, 45-51.

Solomon, Z., Mikulincer, M. & Avitzur, E. (1988). Coping, locus of control, social support and combat-related posttraumatic stress disorder: a prospective study. Journal of Personality and Social Psychology, 55, 279-285.

Solomon, Z., Mikulincer, M. & Flum, H. (1988). Negative life events, coping responses and combat-related psychopathology: A prospective study. Journal of Abnormal Psychology, 97, 302-313.

Solomon, Z., Mikulincer, M., Waifman, M. & Marlowe, D.H. (1991). Delayed and immediate onset PTSD 1: Differential clinical characteristics. Journal of Social Psychiatry and Psychiatric Epidemiology, 26, 1-7.

Spencely, A & Jerrom, B. (in preparation). Intrusive traumatic childhood memories in depression: Towards a model of traumatic reprocessing? Behavioural and Cognitive Psychotherapy.

Steil, R. & Ehlers, A. (in preparation). Cognitive correlates of intrusive memories after road traffic accidents.

Steinberg,, M., Rounsaville, B., Cicchetti, D. (1991). Detection of dissociative disorders in psychiatric patients by a screening instrument and a structured diagnostic interview. American Journal of Psychiatry, 148, 1050-1054.

Swann, A.C., Secunda, S.K., Stokes, P.E., Croughan, J., Davis, J.M. Koslow, S.H. & Maas, J.W. (1990). Stress, depression and mania: Relationship between perceived role of stressful events and clinical and biochemical characteristics. Acta Psychiatrica Scandinavica, 81, 389-397.

Swindle, R.W., Cronkite, R.C. & Moos, R.H. (1989). Life stressors, social resources, coping and the 4 year course of unipolar depression. Journal of Abnormal Psychology, 98, 468-477.

Teasdale, J.D. (1988). Cognitive vulnerability to persistent depression. Cognition and Emotion, 2, 247-274.

Teasdale, J.D. (1993). Emotion and two kinds of meaning: Cognitive therapy and applied cognitive science. Behaviour Research and Therapy, 31, 339-354.

Teasdale, J.D. & Dent, J. (1987). Cognitive vulnerability to depression: An investigation of 2 hypotheses. British Journal of Psychiatry, 26, 113-126.

Tulving, E. & Scachter, D.L. (1990). Priming and human memory systems. Science, 247, 301-306.

van der Kolk, B.A. (1988). The trauma spectrum: The interaction of biological and social events in the genesis of the trauma response. Journal of Traumatic Stress, 1, 277-279.

van der Kolk, B.A., Perry, J.C. & Herman, J.L. (1991). Childhood origins of self-destructive behavior. American Journal of Psychiatry, 148, 1665-1671.

Veiel, H.O.F., Kuhner, C., Brill, G. & Ihle, W. (1992) Psychosocial correlates of clinical depression after psychiatric in-patient treatment. Psychological Medicine, 22, 415-427.

Vinokur, A.D. & Ryn, M.V. (1993). Social support and undermining in close relationships: Their independent effects on the mental health of unemployed persons. Journal of Personality and Social Psychology, 65, 350-359.

Wegner, D.M., Schneider, D.J., Carter III, S.R. & White, T.L. (1987). Paradoxical effects of thought suppression. Journal of Personality and Social Psychology, 53, 5-13.

Wells, K.B., Burnam, M.A., Rogers, W., Hays, R. & Camp, P. (1992). The depression in adult outpatients. Results from the Medical Outcomes Study. Archives of General Psychiatry, 49, 788-794.

Wenninger, K. & Ehlers, A. (in preparation). Nature of intrusive recollections in child sexual abuse survivors.

Wenzlaff, R.M, Wegner, D.M. & Roper, D.W. (1988). Depression and control: the resurgence of unwanted negative thoughts. Journal of Personality and Social Psychology, 55, 882-892.

Williams, J.B. & Spitzer, R.L. (1983). The issues of sex bias in DSM-III. American Psychologist, 38, 793-798.

Williams, J.M.G. (1994). Depression and specificity of autobiographical memory. In D.C. Rubin (Ed.) Remembering Our Past: Studies in Autobiographical Memory. Cambridge University Press.

Williams, J.M.G. & Dritschel, B.H. (1988). Emotional disturbance and the specificity of autobiographical memory. Cognition and Emotion, 2, 221-234.

Winokur, G. & Clayton, P. (1967). Family history studies: II. Sex differences and alcoholism in primary affective illness. British Journal of Psychiatry, 113, 973-979.

Winokur, G. & Coryell, W. (1992). Familial subtypes of unipolar depression: A prospective study of familial pure depressive disease compared to depression spectrum disease. Biological Psychiatry, 32, 1012-1018.

Winter, H. & Ehlers, A. (in preparation). Predictors of posttraumatic stress disorder after road traffic accidents.

Wolf, E.S. (1988). Treating the Self. New York: Guilford Press.

Wolpe, J. (1979). The experimental model and treatment of neurotic depression. Behaviour Research and Therapy, 17, 555-565.

Wood, J.V., Saltzberg, J.A., Neale, J.M., Stone, A.A. & Rachmiel, T.B. (1990). Self-focused attention, coping responses and distressed mood in everyday life. Journal of Personality and Social Psychology, 58, 1027-1036.

Zeiss, R. & Dickman, H. (1989). PTSD 40 years later: Incidence and person-situation correlates in former POWs. Journal of Clinical Psychology, 45, 80-87.