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**THE CONGRUENCY HYPOTHESIS.
A CLOSER LOOK AT ITS COMPONENTS:
INTERPERSONAL AND ACHIEVEMENT-ORIENTED PERSONALITY
AND LIFE EVENTS**

A dissertation presented in partial fulfilment of
the requirements of the degree of Doctor of Philosophy
in Psychology at Massey University

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ABSTRACT

This research involved an examination of Beck's congruency hypothesis (1983). There were three studies, each examining an assumption that underpins the congruency hypothesis. There were two groups of participants: 61 remitted depressives and 61 university student controls, who were followed for a 1-year period.

The first study stemmed from Blatt's theory that interpersonal and achievement-oriented personality styles are independent and enduring, arising from different early childhood experiences. It investigated individuals' perceptions of the parenting style they had experienced in the first 16 years of their life and how these related to their current personality style. Overall, an achievement-oriented personality style (self-criticism) was predicted by maternal protectiveness in the university student sample and by a lack of maternal warmth in the clinical sample. No relationship between perceptions of early parenting and an interpersonal personality (dependency) was found.

The second study comprised two parts. The first examined the stability of personality over the 1-year examination period. This was seen as an important test. For personality to be a vulnerability factor or diathesis in terms of the congruency hypothesis, it must be stable over time. The second part of this study investigated whether any significant changes in personality over time were predicted by recent negative life events that had been experienced. The results showed that all of the personality constructs investigated (sociotropy, autonomy (solitude, independence), dependency, self-criticism) were stable over the 6-month period. However, during the 12-month period, there was a significant decrease in mean scores on sociotropy for the university students group and a significant decrease in mean scores on sociotropy and dependency for the remitted depressives group. For the remitted depressives group, change in dependency was predicted by stress resulting from negative life events as rated by an independent research team (objective stress) but not by participants' own ratings of the stressfulness of these events (subjective stress).

In research testing the congruency hypothesis, life events are routinely classified as being either sociotropic or autonomous. The third study investigated the validity of this practice. The results of this study demonstrated only partial support for the a priori procedure for classifying events in this way. Across samples (university students and remitted depressives) and measures (self-reported and interview measures of life events), participants did not consistently rate events as sociotropic or autonomous in line with their own personality styles.

Throughout the research, many of the methodological shortfalls that were identified as being present in prior research on the congruency hypothesis were addressed. Notably, comparisons were made between the different samples (student versus clinical) and measures (self-report versus interview) used. The results of the current research differed depending on the choice of sample and the type of measures used. For example, in some instances, significant results were found only when the stressfulness of an event was rated by the research team (objective stress) rather than by the participants themselves (subjective stress). However, it is subjective stress that is most commonly used in previous research on the congruency hypothesis. This choice could well contribute to the many non-significant results found in this area of study. These and other methodological issues are taken into account, examined, discussed, and recommendations for future research are made.

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CHAPTER 1: INTRODUCTION AND OVERVIEW

Introduction

The 1960s and 1970s saw a considerable number of studies on the relationship between life events and depression (Brown, 1974, 1981; Brown, Bifulco, & Harris, 1987; Brown, Harris, & Peto, 1973; Cadoret, Winokur, Dorzab, & Baker M, 1972; Holmes & Rahe, 1967; Paykel, 1979; Paykel, Myers, Dienelt, Klerman, Lindenthal, & Pepper, 1969). Taken together, an overall implication of that earlier research was that vulnerability to depression increased if a person had experienced a number of negative life events in the preceding year. However, two decades of extensive research suggested that the experience of negative life events alone does not adequately explain the onset or recurrence of depression. Researchers began to recognise that the relationship between life events and depression was more complicated than some had originally thought.

Additionally, this initial dissatisfaction with a simplistic view of the life events-depression relationship led to what Aaron Beck called the congruency hypothesis (Beck, 1983, 1987). The congruency hypothesis endeavoured to explain better how life events predicted depression, by combining what had previously been two independent fields of study, namely life events research and personality research. This hypothesis suggested that personality characteristics, and the specific type of life events experienced by an individual, are both important variables that, in combination, may leave a person more vulnerable to depression. Put simply, the congruency hypothesis theorises that an individual is most likely to become depressed following negative life events that are “congruent” with the individual’s personality style. The congruency hypothesis represents a diathesis-stress model, whereby personality is the diathesis. According to Barlow and Durand (2005), a “diathesis” is generally, but by no means exclusively, genetically based and the “stress” is environmental. These two components interact to produce depression.

Within this particular model, personality has been conceptualised as two distinct types: one is affiliative or interpersonal in nature (sociotropy); the other is based on achievement (autonomy; Beck, 1983). Sociotropic individuals tend to define themselves in terms of contact with and approval from others. In contrast, autonomous individuals

are invested in preserving their freedom and independence and in achieving meaningful goals. Blatt (1974) proposed two very similar personality types based on a psychodynamic perspective, which he referred to as dependent and self-critical, respectively (see Chapter 2). Some research investigating the congruency hypothesis has used Beck's constructs whereas other research has used Blatt's constructs. The psychological literature has largely referred to the two sets of classification interchangeably. However, as discussed in Chapter 2, there are some important differences. One of these differences - Blatt's assumption of links to parenting factors - is tested in the current dissertation.

However, similar for both classifications, the congruency hypothesis predicts that sociotropic or dependent individuals tend to react more adversely to interpersonal loss or rejection. Conversely, autonomous or self-critical individuals will be more likely to experience depression after achievement failures.

As expanded on later (see Chapter 6), empirical support for the congruency hypothesis to date has been equivocal. In general, greater support for the congruency hypothesis has been found for the interpersonal constructs (sociotropy and dependency) than for the achievement-oriented constructs (autonomy and self-criticism) (Clark, Beck, & Brown, 1992; Nietzel & Harris, 1990; Robins, 1990). Explanations for the lack of findings for autonomy and self-criticism have included sampling differences, including the dominance of student samples (Nietzel & Harris, 1990; Segal, Shaw, Vella, & Katz, 1992; Zaretsky, Fava, Davidson, Pava, Matthews, & Rosenbaum, 1997), small sample sizes (Clark et al., 1992), differences in the measures used (Robins, 1990; Robins & Block, 1989), the use of cross-sectional designs and the methods of data analysis (Bartelstone & Trull, 1995). Haaga, Dyck, and Ernst (1991) concluded that no study up to that time had incorporated all the conditions necessary to test the congruency hypothesis adequately. Indeed, 8 years later, after this thesis was undertaken, Clark, Beck, and Alford (1999) saw this conclusion as true in 1999 as it was in 1991.

More fundamentally, and the topic that represents the basis of this thesis, some of the assumptions on which the congruency hypothesis rests have been questioned. An important assumption is whether sociotropy/dependency and autonomy/self-criticism are in fact stable personality traits at all. Coyne and Whiffen (1995) suggest that

elevations on measures of these constructs reflect current life circumstances faced by a person rather than more enduring personality traits. This is in complete opposition to Blatt's (1974) theory, which states that dependency and self-criticism are enduring personality traits that stem from early childhood experiences. In particular, Blatt (1974) theorised that dependency is associated with a lack of care (inconsistent, neglectful, rejecting and abandoning parenting), whereas self-criticism is associated with a harsh and critical parenting style. However, Coyne and Whiffen (1995) argue strongly that such assertions should be subject to critical scrutiny rather than just simply accepted, as is often implied in research involving the congruency hypothesis.

Another fundamental issue is whether life events can be classified objectively as sociotropic/dependent or autonomous/self-critical as is currently assumed. An alternative hypothesis, tested in this thesis, is that, rather than being inherently sociotropic/dependent or autonomous/self-critical as tests of the congruency hypothesis have assumed (Hammen, Ellicott, Gitlin, & Jamison, 1989; Hammen, Marks, Mayol, & de Mayo, 1985; Robins & Block, 1988; Smith, O'Keefe, & Jenkins, 1988; Zuroff & Mongrain, 1987), life events are perceived as interpersonal or achievement related based on individuals' interpretations of these events¹ (Abramson, Alloy, & Hogan, 1997; Allen, Horne, & Trinder, 1996; Gotlib & Hammen, 1992).

Objectives and Research Questions

Rather than simply test the congruency hypothesis directly, the current research investigated some of the underlying issues and assumptions. Three main research questions were examined in the current thesis.

1. Developmental Origins of Dependency and Self-criticism

Are childhood experiences of parenting associated with the development of dependency and self-criticism?

¹ These interpretations would be based on a person's own sociotropic/dependent or autonomous/self-critical personality style.

2. *Social Context and Personality*

Are dependency and self-criticism, and sociotropy and autonomy trait-like features of personality and to what extent are they influenced by stressful life circumstances?

3. *The Classification of Life Events*

Can life events be classified a priori according to predetermined taxonomies as interpersonal or achievement related, or does this classification depend on the perceptions of the individual?

While addressing these research questions, the current research aimed to adhere to current methodological recommendations in the choice of measures, participants, design and analysis (e.g., Clark et al., 1999; Coyne & Whiffen, 1995).

The theoretical background for the current research is provided by defining and discussing the constructs sociotropy and autonomy, and dependency and self-criticism. This includes theory and research related to their developmental origins (Chapters 2) and the trait or state-like nature of these constructs (Chapter 3). This is followed by a consideration of the measurement of life events in Chapter 4. In this chapter, the limitations and merits of the self-report and the interview method of assessing life events are discussed. The method of classifying life events as either interpersonal or achievement based, according to a priori taxonomies, is reviewed in Chapter 5. Chapter 6 reviews research testing the congruency hypothesis including the state of current knowledge and current research directions, as well as methodological considerations in the area. The research questions pertaining to the current thesis are specified more fully in Chapter 7, followed by the Method (Chapter 8), Results and Discussion sections for each individual research question and related study (Chapters 9–13) and Overall Findings and Conclusions (Chapter 14).

CHAPTER 2: INTRODUCTION TO THE PERSONALITY CONSTRUCTS: SOCIOTROPY/DEPENDENCY AND AUTONOMY/SELF-CRITICISM

Introduction

The terms sociotropy and autonomy (Beck, 1983), and dependency and self-criticism (Blatt, 1974) have been used “virtually interchangeably” in the psychological literature (Bartelstone & Trull, 1995, p. 279). This chapter defines the personality constructs, looking first at the interpersonal constructs (sociotropy and dependency) and then at the achievement constructs (autonomy and self-criticism). The theoretical background of these constructs is examined, including the developmental origins hypothesised for each construct. The instruments developed to measure both Beck’s and Blatt’s constructs are then introduced. Finally, the differences and similarities between Blatt’s and Beck’s constructs are examined.

Sociotropy and Dependency

Central to both sociotropy and dependency is the importance of interpersonal relationships to a person’s self-concept. In his original 1983 writings about sociotropy (originally termed sociality), Beck wrote: “Sociality refers to the person’s investment in positive interchange with other people” (Beck, 1983, p. 272). Highly sociotropic individuals tend to define their self-worth in terms of contact with and approval from others. They tend to be overly concerned about the possibility of disapproval or rejection (Zaretsky et al., 1997). Sociotropy is a “combination of beliefs, behavioural dispositions and attitudes” (p. 42) that lead an individual to attend to and depend on others for personal satisfaction (Sato & McCann, 1997).

Similarly, Blatt described highly dependent individuals as experiencing “feelings of helplessness, weakness, and depletion and wishes to be cared for, loved, fed and protected and intense fears of being abandoned” (Blatt, 1974, p. 152).

Autonomy and Self-criticism

Autonomy (initially termed individuality) refers to "...the person's investment in preserving and increasing his independence, mobility and personal rights; freedom of choice, action and expression; protection of his domain; and defining his boundaries" (Beck, 1983, p. 272). Highly autonomous individuals tend to be overly invested in preserving their freedom and independence and in achieving meaningful goals (Zaretsky et al., 1997).

Along similar lines, Blatt described self-critical individuals as experiencing "harsh, punitive, and critical superego resulting in intense feelings of inferiority, worthlessness, guilt and a wish for atonement. They are concerned about having failed to live up to expectations and there are struggles to win approval and recognition" (Blatt, 1974, p. 152). Individuals high on self-criticism are thought to engage in harsh self-scrutiny and have a chronic fear of disapproval from significant others. This results in a striving for excessive achievement as well as competitive tendencies (Blatt & Zuroff, 1992).

Alden and Bieling (1996) observed that, whereas Beck's autonomous individuals are described as primarily concerned with "preserving their independence and defining boundaries", individuals high on self-criticism are thought to be "competitive and critical toward others and concerned with obtaining social approval, respect and recognition" (p. 62). This competitive, critical aspect of self-criticism is a point of difference between autonomy and self-criticism and is not particularly central to Beck's construct of autonomy. The difference is summarised by the statement: "whereas the autonomous individual strives to be free of others, the self-critical individual strives to establish superiority to and obtain respect from others" (Alden & Bieling, 1996, p. 62).

Theoretical Backgrounds to the Constructs

The idea of two distinct personality dimensions, representing excessive concerns about interpersonal relationships or autonomous achievements, predates Beck's (1983) and Blatt's (1974) writings. As far back as 1917, Freud likened melancholia to "fixated orality", in which a person persistently feels "hunger" for psychological nourishment from others and is predisposed to depression (as cited in Nietzel & Harris, 1990). The more autonomous/self-critical personality, marked by excessive demands for

accomplishment and control, is similar to the psychodynamic emphasis on the dangers of harsh superegos. These Freudian ideas have influenced a wide range of subsequent psychological theories including ego-analytic psychology (Blatt, 1974), developmental psychopathology (Bowlby, 1977), object relations theory (Arieti & Bemporad, 1980) and, to a lesser extent, **cognitive** therapy (Beck, 1983).

Beck's Theory

For 40 years now, Beck's work has highlighted the important role of cognitive biases in the development and maintenance of depressive episodes (e.g., Beck, 1967, 1976; Beck, Rush, Shaw, & Emery, 1979). In a refinement of the cognitive model, Beck introduced the idea of sociotropy and autonomy as vulnerability factors in a cognitive diathesis-stress model of depression (Beck, 1983). According to Beck's theory, these personality dimensions involve "clusters of schemas" (Clark et al., 1999, p. 264) that organise around the sociotropic or autonomous theme. These remain "latent" or "unconscious" (Clark et al., 1999, p. 262) when a person is not depressed, but can still influence a person's interpretations of events. An individual becomes conscious of sociotropic and autonomous schemas only when relevant circumstances impinge on the individual's vulnerability. Beck (2002) gives the example of a person with the unconscious sociotropic schema "I need to be loved in order to be happy". This schema may become salient only if the person perceives that he or she is not loved by a key person.

When an individual is faced with a threat in a domain corresponding to, or congruent with, their specific type of personality, they are then thought to become vulnerable to depression (Beck, 1983). Because depression is thought to occur when there is a congruence between life events and personality vulnerability, Beck named his diathesis-stress theory The Congruency Hypothesis (Beck, 1983).

In line with this theory, sociotropic individuals will interpret interpersonal losses as having increased implications for personal worth and well-being. Autonomous individuals will interpret failures to achieve goals as having similar consequences.

More recently, a differentiation has been made between *maladaptive* and *adaptive* sociotropic and autonomous schemas (Clark et al., 1999). Maladaptive sociotropic or

autonomous schemas, especially those that relate to the primal mode², make a person more vulnerable to depression. An example of a maladaptive schema would be “I must please others in order to be loved and accepted”. This would make a person more vulnerable to depression than someone with a more adaptive sociotropic belief “I like to please others” (Clark et al., 1999, p. 111).

Whereas some people show a predominantly sociotropic or autonomous personality orientation, others may have more of a balance (Beck, 1983). Beck and his colleagues also believe that relatively more sociotropic or autonomous schemas can operate depending on the context (Clark et al., 1999).

Personality styles are also thought to influence symptom presentation during an acute stage of depression (Beck, 1983), with high sociotropy being associated with cognitions of interpersonal deprivation. Depressive symptoms are likely to be accompanied by requests for help, loss of gratification, crying, concern about personal and social attractiveness, lability of mood, anxiety, and heightened sadness and loneliness. Passive modes of suicide attempts are thought to be more likely with sociotropic individuals (Clark, Steer, Haslam, Beck, & Brown, 1997). High autonomy is associated with cognitions along themes of defeat and depressive symptoms such as anhedonia, self-criticalness, withdrawal and loss of interest in people, inability to cry, hostility and concern about personal effectiveness. Active modes of suicide attempts are thought to be more likely to occur (Clark et al., 1997). Sociotropy and autonomy have also been hypothesised to predict response to treatment, with sociotropic individuals thought to be relatively better suited to group therapy, and with autonomous individuals thought to be relatively better suited to individual therapy (Zettle, Haflich, & Reynolds, 1992; Zettle & Herring, 1995, as cited in Bieling, Beck, & Brown, 2000).

The Developmental Origins of Sociotropy and Autonomy

It is suggested that high sociotropy or autonomy is probably passed on from parent to child by a number of factors including genetic transmission, modelling and negative parenting practices (Clark et al., 1999). As early as 1967, Beck argued that being exposed to negative influences and judgements by significant figures during childhood

² The “primal mode” deals with basic issues fundamental to the survival of an organism, such as self-preservation, procreation, safety, dominance and sociability (Clark et al., 1999).

would leave an individual vulnerable to take on negative attitudes and incorporate them within their own cognitive schemas. He also recognised that irrevocable losses in childhood, such as the loss of a parent, are likely to make an individual more sensitive to analogous losses later in life (Beck, 1967). Maltreatment and neglect are also recognised contributors to a cognitive vulnerability to depression. Emotional maltreatment may be particularly relevant here because victims of such abuse are often subjected to negative comments such as “you’re ugly” (Beck & Kovacs, 1978, as cited in Clark et al., 1999). Consistent with this hypothesis, one recent study found that emotional abuse was significantly related to both sociotropy and autonomy (Mendelson, Robins, & Johnson, 2002). However, the developmental origins of sociotropic and autonomous styles are still not clear, with relatively little research having been undertaken (Brown & Beck, 2002; Charlton & Power, 1995).³ Overall, Beck and his colleagues are less clear than Blatt about the hypothesised mechanism by which excessive sociotropy or autonomy develops.

Blatt’s Theory

Blatt’s theory states that dependency and self-criticism are two independent and enduring personality modes that arise from different early childhood experiences (Blatt, 1974). Blatt views dependency and self-criticism as interdependent in the normal developmental process. A healthy degree of dependency involves a desire and a capacity for developing and sustaining satisfying interpersonal relationships. A healthy degree of self-criticism results in stable, realistic, positive self-identity associated with the attainment of realistic goals and standards (Lehman, Ellis, Becker, Rosenfarb, Devine, Khan, & Reichler, 1997). In contrast, predominantly dependent or self-critical personality styles reflect “maladaptive coping styles that have a continuity with normal developmental processes” (Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982, p. 122). These maladaptive coping styles are seen as predisposing vulnerability factors to the onset of depression. For a person scoring highly on dependency, behaviours are likely to be dependent and impulsive, and include “oral” behaviours such as alcohol use, food problems or drug use (Blatt, 1982). Highly self-critical individuals are thought to be characterised by social isolation and intense academic and/or professional

³ Less research has been conducted on the origins of sociotropy and autonomy than on the origins of dependency and self-criticism.

achievement needs.

The Developmental Origins of Dependency

Blatt's constructs grew out of psychoanalytic and cognitive developmental theories (Bowlby, 1954; Werner, 1948). In accordance with object relations theory, Blatt postulated that a person's personality style is determined by the developmental level of object representation that they have reached. Blatt suggests that the dependent personality style stems from an "early disruption of the basic relationship with the primary object" (Blatt, 1974, p. 152) and is likely to occur when a mother fails to provide adequate care, nurturance and support for their infant (Blatt & Zuroff, 1992).⁴

In their 1992 review, Blatt and Zuroff identified the parenting style associated with the development of a dependent personality as a lack of care characterised by inconsistent, neglectful, rejecting and abandoning parenting and, more recently, overindulgence.⁵ Certainly, there are studies that have supported a lack of parental care (Brewin, Firth-Cozens, Furnham, & McManus, 1992; Enns, Cox, & Larsen, 2000; Koestner, Zuroff, & Powers, 1991; McCranie & Bass, 1984; Sadeh, Rubin, & Berman, 1993) and overindulgence (Rosenfarb, Becker, Kahn, & Mintz, 1994) as being associated with dependency.

However, early studies reviewed by Bornstein (1992) investigating the relationship between parenting styles and dependency in children also found controlling, authoritarian and overprotective parenting styles to be associated with dependency (Finney, 1961; Gordon & Tegtemeyer, 1983; Hatfield, Ferguson, & Alpert, 1967; Kagan & Moss, 1960; Murphy, 1962). Some of the more recent studies found similar results, with overprotectiveness (Ojha & Singh, 1988; Parker & Lipscombe, 1981) and control or authoritarianism (Baumrind, 1971; McCranie & Bass, 1984; Rosenfarb et al., 1994; Winder & Rau, 1962) being associated with dependency. Theoretically, a controlling and authoritarian parenting style is associated with self-criticism, not

⁴ As is discussed below, difficulty with managing control as toddlers begin to assert their independence and autonomy, is thought to contribute to issues of self-worth and self-definition (self-criticism).

⁵ Although neglectful and rejecting parenting was first hypothesised to contribute to dependency (Blatt, 1974), a tendency to spoil children was later added (Blatt & Shichman, 1983).

dependency (Blatt, 1974). No studies have looked directly at the relationship between dependency and abusive parenting.⁶

To summarise, a lack of care and rejection (Blatt, 1974), as well as an overindulgent parenting style (Blatt & Shichman, 1983), are theorised to predict dependency. Although there is some support for these ideas, overprotective, controlling and authoritarian parenting styles have also been found to predict dependency.

The Developmental Origins of Self-criticism

Although individuals high on self-criticism are thought to have their basic dependency needs met, they fail to become autonomous or to develop a competent sense of self. Rather, an exaggerated sense of independence and self-definition, where interpersonal relationships are relatively neglected, emerges (Blatt, 1974). Blatt formulated that a harsh and critical parenting style limits the development of an independent, competent sense of self. In particular, parents of self-critical individuals are seen as “intrusive, controlling, judgmental, punitive parents” (Blatt & Zuroff, 1992, p. 532).

In support of Blatt’s theory, research has shown self-criticism to be associated with strict control/overprotection (Enns et al., 2000; McCranie & Bass, 1984; Rosenfarb et al., 1994; Whiffen & Sasseville, 1991), expectations of achievement (McCranie & Bass, 1984; Whiffen & Sasseville, 1991) and parental criticism (Brewin, Andrews, & Furnham, 1996).

However, although lack of care was theorised to predict dependency (Blatt, 1974), it has also been associated with self-criticism (Blatt, Quinlan, & Bers, 1991, cited in Blatt & Homman, 1992; Brewin et al., 1992; Enns et al., 2000; Koestner et al., 1991), as has “feeling uncomfortable with parents” (Firth-Cozens, 1992) and “inconsistent affection” (McCranie & Bass, 1984). No studies have looked specifically at the relationships between self-criticism and emotional abuse.⁷

⁶ The study of Mendelson et al. (2002) found that emotional abuse was significantly related to sociotropy (see p. 11).

⁷ Mendelson et al. (2002) found that emotional abuse predicted Beck’s construct of autonomy (see p. 11).

Summary

Overall, a clear pattern of differential precursors to dependency (lack of affection/overindulgence) and self-criticism (controlling/critical parenting), as theorised by Blatt (1974), has not been demonstrated. Rather, a mixed picture has emerged. Proneness to depression in general may be influenced by certain child-rearing practices, with rejection, inconsistent expressions of affection and strict control being implicated (Parker, 1982, 1983; Perris, Arrindell, Perris, Eisemann, Van der Ende, & Von Knorring, 1986). However, support for factors like rejection is not unequivocal (Rapee, 1997). As a consequence of a lack of clear findings, what parenting styles put a person at risk of subsequent depression are not clear. Certainly, the research has also shown some overlap between parenting styles associated with self-criticism and dependency, with control, overprotection and lack of care being linked to both constructs.

It is of note that a number of studies have looked solely at the relationship between parenting and self-criticism (e.g., Brewin et al., 1992, 1996; Firth-Cozens, 1992; Koestner et al., 1991; Rosenfarb et al., 1994), with dependency being less frequently studied. The reason for this is not clear, but it may be because relationships between parenting and dependency have been inconsistent and non-significant findings are more common.

Measurement of Sociotropy and Autonomy, and Dependency and Self-criticism

Sociotropy and autonomy are usually measured using the Sociotropy and Autonomy Scale (SAS; Beck, Epstein, Harrison, & Emery, 1983). The SAS has been revised several times (Bieling et al., 2000; Clark & Beck, 1991; Clark, Steer, Beck & Ross, 1995; Clark et al., 1997; Robins, 1985; Rude & Burnham, 1993; Sato & McCann, 1997; see Appendix A). An alternative measure, the Personal Styles Inventory (PSI; Robins, Ladd, Welkowitz, Blaney, Diaz, & Kutcher, 1994), has also been developed to measure these constructs. Dependency and self-criticism are measured by the Depressive Experiences Questionnaire (DEQ; Blatt, D'Afflitti, & Quinlan, 1976) and subsequent revisions (Bagby, Parker, Joffe, & Buis, 1994; Blatt, Zohar, Quinlan, Zuroff, & Mongrain, 1995; Santor, Zuroff, Mongrain, & Fielding, 1997; Viglione, Lovette, Gottlieb & Friedberg, 1995; Welkowitz, Lish, & Bond, 1985; see Appendix A). Although it was not the original purpose of the scale, Mongrain and Zuroff (1989) have extracted an interpersonal subscale and an achievement-oriented subscale

(corresponding to sociotropy/dependency and autonomy/self-criticism) from the Dysfunctional Attitude Scale (DAS; Weissman & Beck, 1978). Another measure, the Interpersonal Dependency Inventory (IDI; Hirschfeld, Klerman, Gough, Barrett, Korchin, & Chodoff, 1977), can also be used to measure dependent and self-critical personality styles.

Sociotropy and Autonomy Scale

The SAS is a 60-item questionnaire that requires participants to rate the *percentage that describes you*, from a choice of 25%, 50%, 75% and 100%. It consists of two 30-item scales, SAS Sociotropy and SAS Autonomy. The SAS (Beck et al., 1983) was originally developed from a clinical sample of adults presenting for therapy using self-reports and other clinical material collected at the Center for Cognitive Therapy in Philadelphia. The SAS has subsequently been used widely in research concerning the congruency hypothesis (e.g., Bartelstone & Trull, 1995; Hammen et al., 1989b; Robins & Block, 1998; Robins, Block, & Peselow, 1990; Robins, Hayes, Block, Kramer, & Villna, 1995).

Although SAS Sociotropy has been shown to have good reliability and validity, widespread concerns emerged about the SAS Autonomy scale (Barnett & Gotlib, 1988; Clark et al., 1995; Robins & Block, 1998). SAS Autonomy has been criticised for poor convergent and divergent validity and for not interacting with life events to predict depression in the same way that sociotropy does. It has been suggested that SAS Autonomy measures the absence of dependency, rather than measuring autonomy directly (Blaney & Kutcher, 1991). Certainly, SAS Autonomy has been described as a “less tight and less coherent construct” than SAS Sociotropy (Rude & Burnham, 1993, p. 545). As seen in Appendix A, revisions of the SAS have separated out what appear to be the more maladaptive aspects from their adaptive features, with between two and four autonomous subfactors (Clark et al., 1997). As discussed in more detail in Appendix A, the current study used one of these revisions, the SAS-R.

Depressive Experiences Questionnaire

The DEQ was developed by Blatt and his colleagues (Blatt et al., 1976) to assess a range of phenomenological experiences associated with depression. Following a review of the literature that helped to create an initial list of 150 statements, 66 items were

selected by a group of expert judges. These statements were “not direct symptomatic expressions of depression, but rather reflected experiences frequently reported by depressed patients” (Blatt et al., 1976, p. 384). Items covered issues of “depreciated sense of self and others, dependency, helplessness, egocentricity, fear of loss, ambivalence, difficulty in dealing with anger, self blame, guilt, loss of autonomy, and distortions in family relations” (Blatt et al., 1976, p. 384).

Using a university student sample, separate factor analysis (principal components and varimax rotation) was performed for males and females. This analysis resulted in three major factors being extracted for both the males and the females. These factors were called Dependency, Self-criticism and Efficacy.⁸ Most studies include just the Dependency and Self-criticism subscales, as these reflect the two vulnerability constructs.

The resulting DEQ is a 66-item questionnaire that requires respondents to endorse items on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The DEQ is scored using a factor weighting system (described in Blatt et al., 1976) whereby each factor is calculated by converting the raw item score to a *z* score,⁹ and then multiplying this by the factor weight for the three factors. Different factor weightings are used for males and females. Although empirically derived, this practice of weighting items using factor-score coefficients derived from a large university student sample is not without its critics (for a fuller discussion, see Santor et al., 1997b).

The convergent and divergent validity of the DEQ has been questioned (Blatt et al., 1982; Klein, Harding, Taylor, & Dickstein, 1988; Riley & McCranie, 1990). Revisions of the DEQ have been inconsistent in their ability to replicate factorial validity for the DEQ in both non-clinical and clinical samples (Viglione, Clemmey & Camenzuli, 1990; Viglione et al., 1995). In their 1990 review, Viglione et al. discussed the Dependency and Self-criticism scales to be “conceptually advanced but psychometrically limited” (p. 92). The DEQ Self-criticism scale has been found to be associated with both

⁸ Dependency and Self-criticism have already been defined. The Efficacy factor represents a “sense of personal effectiveness and competence” (Welkowitz et al., 1985, p. 90).

⁹ *z* scores are calculated by subtracting the raw score from the mean score on that item for his or her sex group and then dividing by the standard deviation of the sex group.

achievement and interpersonal concerns (Barnett & Gotlib, 1988; Blaney & Kutcher, 1991; Robins et al., 1994).

To counter the problem of factor-derived scaled scores, revisions have tended to use unit-weighted composite scale scores. However, none of the revisions has been able to replicate the degree of orthogonality routinely observed between the original Dependency and Self-criticism scales.¹⁰ Instead, moderate to large correlations between the two factors have been found in revised measures, making it difficult to demonstrate differential relations with other measures (Robins et al., 1995).

Contrary to this trend, Santor and his colleagues designed a revision that resulted in unit-weighted scales that preserved the psychometric properties of the original DEQ, including orthogonality. This revision is called the McGill revision (Santor et al., 1997b). Rather than using factor analytic techniques to select items, scales with techniques designed specifically to assess the degree to which revisions preserve the properties of the original scales were developed. The McGill revision produces factors more like the original factors while managing to reduce the number of items from 66 to 60 (Blatt et al., 1976). The McGill revision was used in the current study (for more information on the DEQ, see Chapter 8).

Differentiation of Blatt's and Beck's Constructs

As stated above, the psychological literature has tended to use Beck's and Blatt's constructs interchangeably, with only a small number of authors cautioning against this practice (Baker, Nenneyer, & Barris, 1997; Bieling et al., 2000; Clark et al., 1999; Coyne & Whiffen, 1995; Rude & Burnham, 1993). Rude and Burnham (1993) see this lack of clarity as an obstacle to interpreting the results from studies investigating the congruency hypothesis.

¹⁰ Correlation coefficients between the original factor-derived Dependency and Self-criticism scales have generally been quite small in student and community samples, ranging from -0.22 to 0.15 (Blaney, & Kutcher, 1991; Blatt et al., 1982; McCranie & Bass, 1984; Zuroff, Moskowitz, Wielgus, Powers, & Franko, 1983, cited in Santor et al., 1997b). They have been somewhat larger in clinical samples (Blatt, 1982; Brown & Silberschatz, 1989; Riley & McCranie, 1990, cited in Santor et al., 1997b).

Comparing Dependency and Sociotropy

Some convergence between the interpersonal constructs of dependency and sociotropy has been shown. For example, Bartelstone and Trull (1995) found moderately strong correlations between DEQ Dependency and SAS Sociotropy ($r = 0.69$). Somewhat similar results were found by Blaney and Kutcher (1991; $r = 0.51$). Convergence has also been demonstrated by both constructs correlating significantly with Beck Depression Inventory (BDI) scores (Bartelstone & Trull, 1995; Blaney & Kutcher, 1991). Factor analysis of the SAS, DEQ and DAS items also yielded a clear interpersonal factor, which drew most heavily upon DEQ Dependency and SAS Sociotropy items (Rude & Burnham, 1993). Alden and Bieling (1996) directly compared Blatt's and Beck's constructs. In contrast to these other studies, they used PSI Sociotropy rather than SAS Sociotropy. They too found significant correlations between PSI Sociotropy and DEQ Dependency ($r = 0.67$).

In their meta-analysis of the relationship of interpersonal and achievement constructs in relation to depression,¹¹ Nietzel and Harris (1990) also concluded that there was evidence for a degree of convergence between DEQ Dependency and SAS Sociotropy. Their meta-analysis focused on the instruments used to measure interpersonal and achievement vulnerabilities and their relationships to depression and to each other. They found that effect sizes for the relationship between interpersonal constructs and depression were reasonably similar across the four measures of interpersonal dependency.¹² However, it must be noted that, of the four interpersonal measures, the effect sizes for SAS Sociotropy and DEQ Dependency were the most dissimilar. One study found little convergence between sociotropy and dependency. Baker et al. (1997) administered the SAS and the DEQ to 63 inpatients diagnosed with depression or dysthymia. Correlation coefficients between DEQ Dependency and SAS Sociotropy and between Self-criticism and Autonomy were both near zero ($r = -0.05$ and $r = -0.02$, respectively). Baker et al. went on in this study to classify the patients into personality subtypes based on the two questionnaires and found that very few people were mutually classified by the two instruments.

¹¹ They included literature from 1976 (the year the first DEQ was published) to 1989. Twenty-one studies were included in the meta-analysis.

¹² The other two measures of interpersonal dependency were subscales from the Interpersonal Dependency Inventory (IDI; Hirschfeld et al., 1977: namely the *Emotional Reliance on Another Person* (ERAP) and *Lack of Social Self-Confidence* (LOSS) subscales. Effect sizes for these scales were SAS Soc (ES = 0.19), DEQ Dep (ES = 0.29), ERAP (ES = 0.29) and LOSS (ES = 0.30).

Comparing Self-criticism and Autonomy

In comparison with indications in some studies of convergence between sociotropy and dependency, key differences between autonomy and self-criticism can be seen by comparing Beck's and Blatt's descriptions of the two constructs. Beck's autonomous style is "harshly self-critical" (Bartelstone & Trull, 1995, p. 280) and is less concerned about disapproval for failing to meet the expectations of others compared with Blatt's self-critical style. Also, Beck's autonomous style does not have the "unrelenting guilt" that is associated with Blatt's self-critical style (p. 280).

In support of the idea that these two achievement constructs are theoretically different, low inter-correlations between SAS Autonomy and DEQ Self-criticism have been shown: $r = 0.23$ (Rude & Burnham, 1993) and $r = 0.23$ (Blaney & Kutcher, 1991). Further, whereas DEQ Self-criticism has been found to correlate with BDI scores, SAS Autonomy has generally not (Rude & Burnham, 1993). In contrast to these studies, Alden and Bieling (1996) found a significant correlation between PSI Autonomy and DEQ Self-criticism ($r = 0.61$). They concluded that the discrepancy between their findings and those of previous research was due to psychometric limitations of the SAS. In addition, factor analysis with SAS, DEQ and DAS achievement scales did not find items loading neatly on to one factor as they had with the interpersonal scales (Rude & Burnham, 1993).

To compound the convergence problem, evidence of a lack of criterion validity for autonomy was in fact indicated in the meta-analysis of Nietzel and Harris (1990). Significant differences in effect sizes between DEQ and SAS subscales and depression were found. The effect sizes (ESs) for DEQ Self-criticism and depression were significant and much greater ($r = 0.49$) than the non-significant and near-zero ESs found for SAS Autonomy and depression ($r = 0.03$). Although Nietzel and Harris (1990) did caution that there were a smaller number of studies using the SAS compared with the DEQ, the finding is nonetheless noteworthy.

Summary

To summarise, some degree of convergence between the interpersonal scales, DEQ Dependency and SAS Sociotropy, has been found, but much less between the achievement scales, DEQ Self-criticism and SAS Autonomy (Blaney & Kutcher, 1991;

Rude & Burnham, 1993). From what little empirical work there is comparing the two sets of constructs, Bieling et al. (2000) concluded overall that the SAS and the DEQ measure “overlapping but not parallel constructs” (p. 764). Similarly, Clark et al. (1999) concluded that findings from different studies using different measures should not be integrated, given the at best moderate level of convergent validity.

CHAPTER 3: STABILITY OF PERSONALITY CONSTRUCTS

Introduction

This chapter reviews the evidence for the trait- or state-like nature of sociotropy-autonomy and dependency-self-criticism. Blatt's theory clearly states that dependency and self-criticism are thought to be stable, trait-like structures. Beck too advocates for the stability of sociotropy and autonomy, although he suggests that sociotropic and autonomous attitudes may be "latent" and "inaccessible" when an individual is not depressed (Clark et al., 1999, p. 262). Coyne and Whiffen (1995) offer an alternative hypothesis. They suggest that elevations on measures of interpersonal and achievement-related constructs may reflect difficult life circumstances, rather than more stable trait-like properties. More recently, Zuroff, Blatt, Sanislow, Bondi, and Pilkonis (1999) introduced the state-trait vulnerability model, an alternative to pure state or pure trait theories.

A Review of the Literature

Before reviewing the evidence for the trait- or state-like nature of sociotropy-autonomy and dependency-self-criticism, it is necessary first to define what is meant by trait. According to Mischel (1968), "traits" or "pervasive underlying mental structures" (p. 8) are relatively stable and enduring predispositions that exert fairly generalised effects on behaviour. Similarly, Allport (1966) defined a trait as a relatively enduring predisposition to behave in specified ways to situations in general. Common to both definitions is the idea of "stable" and "enduring" predispositions. In contrast, Coyne and Whiffen (1995) proposed a state-like conceptualisation of personality whereby scores on measures of personality result from "involvement in a particular kind of social context" (p. 366).

Whether cognitive constructs are stable and trait-like or whether they change with a person's mood and circumstances may depend on the particular type of cognitive construct in question. For example, cognitive personality styles such as sociotropy/dependency and autonomy/self-criticism would be expected to show greater stability across time than specific thoughts (Clark et al., 1999). The view that negative automatic thoughts are more state-like than trait-like has been supported by many

studies that have found negative thinking returned to normal with recovery from depression (see review by Haaga et al., 1991). Moore and Blackburn (1996) have also suggested that, whereas automatic thoughts changed before and after a depressive episode, personality features (e.g., neuroticism, introversion) were likely to be more enduring.

Other researchers disagree that personality-type features are enduring or trait-like (e.g., Coyne & Whiffen, 1995; Klein et al., 1988; Schreiber, 1978). As introduced earlier, Coyne and Whiffen (1995) suggested that elevations on sociotropy-autonomy or dependency-self-criticism might simply reflect difficult life circumstances currently faced by a person. They give the example of a marriage to an undependable mate having potential to inflate scores on sociotropy or dependency. Similarly, persons who have experienced a break up in a close interpersonal relationship may be particularly aware of their unmet interpersonal needs and of the current value that they place on relationships. As a result, given the circumstances, they may describe themselves during this time in more sociotropic terms. In fact, research has underscored the fact that at least certain aspects thought to be more enduring appear to be affected by states such as depressed mood. For example, studies using the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) to operationalise Beck's and Blatt's interpersonal and achievement constructs have consistently reported lower scores on DAS indices after treatment for depression (Zuroff et al., 1999). Other studies have found changes in similar indices (e.g., Hammen, Burge, Daley, Davila, Paley, & Rudolph, 1995; Klein et al., 1988). On the other hand, other research has supported the idea of stability (e.g., Moore & Blackburn 1996; Scott, Harrington, House, & Ferrier, 1996).

Zuroff et al. (1999) described the stability of vulnerability variables as a "fundamental issue" (p. 77), a view supported by Beck and his colleagues, who argue that, in order to be described as a vulnerability factor, cognitive personality constructs must be enduring (Clark et al., 1999). However, whereas Beck's causal model of depression asserts that schemas are stable, trait-like structures, as discussed earlier, it suggests that they are "latent" or "inaccessible" when a person is not depressed (Beck, 1964, 1967; Kovacs & Beck 1978; Clark et al., 1999). In order for these latent beliefs to be accessible to a person's consciousness, they must be primed or activated. Inactive beliefs may produce subtle negative biases in what is attended to, how events are interpreted and what is

remembered (Hedlund & Rude, 1995). However, such biases are thought to be too subtle for individuals to incorporate into their explicit self-knowledge and may not be picked up by questionnaires. They are thought more likely to be detectable using information processing measures and priming procedures (e.g., Ingram, Kendall, Smith, Donnell, & Ronan, 1987).

Related to Beck's idea of latent or inaccessible schemas is the mood-state dependence hypothesis (Persons & Miranda, 1992). Mood-state dependence states that a negative mood state is necessary in order to access negative cognitive content in vulnerable individuals. However, Beck and his colleagues (Clark et al., 1999) disagree that a negative mood state is necessary and believe that latent negative cognitions can also be activated by presenting subjects with primes (such as words or phrases) that are semantically linked with hypothesised latent depressotypic constructs (e.g., Ingram et al., 1987; Segal & Ingram, 1994).

Rather than just looking at the state- versus trait-like properties of cognitive constructs, Santor, Bagby, and Joffe (1997) distinguished between "relative" and "absolute" stability. Absolute stability refers to the extent to which personality scores change (or not) over time, measured by comparing changes in mean scores. In contrast, relative stability refers to the degree to which the relative differences among individuals remain the same over time. A judgement about the relative stability of cognitive constructs is made by examining stability coefficients between data collected at two points in time. For example, Santor et al. (1997a) found that extroversion and neuroticism¹³ demonstrated a high degree of relative stability in the context of changes in mood over time (i.e., a 5-week medication trial). They found that, despite absolute changes in measures of both neuroticism and depression, there was stability in the relative differences in neuroticism among individuals across time. Thus, such findings were taken as providing support for the relative stability of neuroticism, despite weak support for the absolute stability of this construct.

As a consequence of such findings, Zuroff et al. (1999) introduced the idea of a "state-trait vulnerability model" as an alternative to pure *trait* or pure *state* models. The state-

¹³ Extroversion and neuroticism from the NEO Personality Inventory (NEO-PI; Costa & McCrae, 1985, 1989).

trait vulnerability model is intended to account for the fact that personality constructs tend to be elevated when a person is depressed but return to normal when the depression remits. This model agrees with Beck (1996) that negative cognitive-affective structures exist regardless of clinical state and that there are individual differences in their “availability”. Availability refers to the number, intensity and interconnectedness of cognitive-affective structures (Zuroff et al., 1999). Second, fluctuations are thought to take place based on the “accessibility” of these negative cognitive-affective structures between individuals. Accessibility is affected by present mood, social context and biological processes. A cognitive vulnerability can be “inaccessible” and “undetectable” (Zuroff et al., 1999, p. 77) until certain processes increase its accessibility to the point that it can be detected (e.g., on self-report measures). Zuroff et al. provide a more concrete example of a woman with a negative cognitive structure relating to the organising theme of “I am unlovable”. This may be relatively latent or inaccessible while she is in a satisfying romantic relationship. However, the end of this relationship might then trigger this negative cognitive structure, or belief, and make it increasingly accessible to her conscious mind. At this point, her score on a measure such as the DAS-Love subscale would tend to be thought likely to increase.¹⁴ As a consequence, Zuroff et al. argue that it is necessary to assess both absolute and relative stability: “(it is) potentially misleading to focus exclusively on mean changes ... or on relative stability as revealed in correlational analyses ... either form of analyses by itself tells only half the story” (p. 87). Zuroff’s model has not been assessed as yet in relation to sociotropy-autonomy or dependency-self-criticism as measured by the SAS or the DEQ.¹⁵

The majority of research investigating the stability of personality constructs has looked at various subfactors of the DAS. Very few studies have investigated the state- or trait-like nature of sociotropy/dependency or autonomy/self-criticism. Those few studies that do exist are now considered.

¹⁴ The Love subscale of the DAS includes items such as “If people whom I care about reject me, it means there is something wrong with me” and “If a person I love does not love me, it means I am unlovable”.

¹⁵ It has been applied only to interpersonal and achievement subscales extracted from the DAS.

The Stability of Sociotropy-Autonomy and Dependency-Self-criticism

Blatt's theory describes dependency and self-criticism as stable and enduring personal characteristics that originate at different points in the developmental process and are rooted in different kinds of early childhood experiences (Blatt, 1982; Blatt & Zuroff, 1992). In contrast, Beck and his colleagues do not predict a high level of stability across different situations or contexts and think that it is possible for individuals to shift between sociotropic and autonomous personality styles (Clark et al., 1999). Although Coyne and Whiffen (1995) do not disagree with the view of Beck (1983) that sociotropy and autonomy are *activated* by particular life circumstances, it is the view of Coyne and Whiffen that, if these personality schemas are observable only during the episode of depression, then Beck's theory becomes largely "unfalsifiable" (p. 365). In defence of this criticism, Beck and colleagues (Clark et al., 1999) argue that latent depressogenic cognitive constructs should be able to be identified using priming methodologies (as discussed earlier). They claim that studies reporting a return to "normal" levels following a depressive episode are based on a "misunderstanding of the cognitive theory of depression and so do not provide a relevant test of cognitive vulnerability" (Clark et al., 1999, p. 289).

To study the stability of these personality constructs, cross-sectional designs have often been used. Most commonly, personality scores of currently depressed patients or remitted depressives are compared with those of a control group consisting of non-depressed or student participants. According to Blatt's theory at least, dependency and self-criticism are trait-like vulnerability constructs for the development of depression. As such, there should be no difference between the scores of these constructs in currently depressed patients versus remitted depressives. Further, because dependency and self-criticism are vulnerability factors to the development of depression, currently depressed patients and remitted depressives should have higher scores than never-depressed controls (see Coyne & Whiffen, 1995). Although there have been a "large number of studies" (p. 1354) showing that scores on personality scales are no different in remitted depressive patients and non-depressed controls (Santor et al., 1997a), few of these studies have examined sociotropy and autonomy or dependency and self-criticism in particular. A few studies have provided support for the hypothesis that both Blatt's and Beck's constructs (sociotropy and autonomy, and dependency and self-criticism)

are stable personality constructs. For example, Solomon, Haaga, Brody, Kirk, & Friedman (1998) compared recovered depressives with a never-depressed group. They found that the recovered depressives scored higher on both PSI Sociotropy and PSI Autonomy than the never-depressed group. These differences remained significant after controlling for current depressive symptoms. Similarly, Fairbrother and Moretti (1998) found no significant difference in PSI Autonomy scores between remitted depressives and acutely depressed participants. The results were less conclusive for PSI Sociotropy, where there was a "marginally significant" (p. 292) difference in PSI Sociotropy between remitted depressives and acutely depressed participants. Stability for Blatt's constructs (dependency and self-criticism) has also been found. In their study, Franche and Dobson (1992) found that currently depressed and remitted participants had significantly higher dependency and self-criticism scores than normal controls.

However, Zuroff et al. (1999) describe this method of looking cross sectionally and comparing depressed and non-depressed persons as informative but a relatively "weak test" (p. 76) of the vulnerability theory. They propose that differences could have reflected concomitants of the depressed or depressed prone state, rather than predisposing factors per se. Zuroff et al. (1999) and others (Coyne & Whiffen, 1995; Santor et al., 1997a) advocate for prospective studies as a more definitive arbiter.

The handful of prospective studies done to date have produced mixed results. Although prospective studies of non-depressed hypothetically vulnerable individuals would be preferable, difficulties in implementing such studies have meant that treatment outcome studies have been used (Zuroff et al., 1999). Whereas some of these studies support the stability of sociotropy and autonomy independent of clinical state (Moore & Blackburn, 1996; Scott et al., 1996), others have found personality to be affected by both depressed mood and life events (Hammen et al., 1995; Klein et al., 1988). Scott et al. (1996) found that sociotropy and autonomy were independent of clinical state in a treatment outcome study. Participants were 20 patients given medication treatment for depression over a 3–6-month period. In this study, SAS Sociotropy and Autonomy scores did not change significantly as depression remitted across the 3–6-month time frame. Similarly, evidence for stability in autonomy was found by Moore and Blackburn (1996) in adult outpatients undergoing a 16-week treatment programme for depression. No significant change in autonomy was found from pre treatment to post treatment, but there was a

statistical trend for a reduction in sociotropy. This reduction in sociotropy became significant when only those who had responded to treatment were included in the analyses. Patients who had responded to treatment exhibited a significant decrease in levels of sociotropy, although, in line with earlier cross-sectional studies reviewed, scores continued to remain significantly higher than those of non-depressed controls. They concluded that, although autonomy appeared to be stable, there was less support for the stability of sociotropy.

In contrast to these two studies, dependency and self-criticism were seen to decline substantially as depression remitted in a study by Klein et al. (1988). Participants were female outpatients who had been diagnosed with depression according to DSM-III criteria at the beginning of the study. A subgroup was classified as “recovered” 6 months later.¹⁶ Whereas dependency and self-criticism declined in this group of participants as depression remitted, the non-recovered group demonstrated a slight increase in dependency and self-criticism over the same period. They concluded that dependency and self-criticism were affected by clinical state.

In accordance with the view of Coyne and Whiffen (1995), Hammen et al. (1995) suggested that dependent traits may reflect interpersonal events. Although their study did not investigate sociotropy or dependency directly, it did focus on sociotropic-like beliefs and attitudes, specifically attachment relationships using the Revised Adult Attachment Scale (Collins & Read, 1990). Their 1-year longitudinal study of late adolescent women investigated the link between interpersonal cognitions, negative social events and depression. The results indicated that dependent traits such as fears of abandonment could be predicted from interpersonal events, providing evidence for the importance of life events in the expression of dependent personality features. Zuroff et al. (1999) suggest that small sample sizes and inconsistencies across studies in the definition of remission complicate the interpretation of this literature.

The picture is further complicated by the introduction of the idea of absolute versus relative stability (Santor et al., 1997a). Santor et al. differentiated between absolute stability measured by changes in mean scores and relative stability measured by test-

¹⁶ Participants were classified as recovered according to clinical judgements and a score of less than 10 on the Carroll Rating Scale for Depression (CRSD; Feinberg, Carroll, Smouse & Rawson, 1981).

retest correlations. Zuroff et al. (1983) found high test-retest stability in a group of university students over a 13-week period across stressful events such as exams. Similarly, PSI Sociotropy and Autonomy showed high test-retest stability in a group of university students over a period from 5 to 23 weeks (Robins et al., 1994). Bagby, Gilchrist, Rector, Dickens, Joffe, Levitt, Levitan, & Kennedy (2001) found that PSI Sociotropy and PSI Autonomy remained relatively stable over time despite a significant decrease in depressive symptoms with pharmacological treatment. These conclusions were based in part on test-retest correlation coefficients of 0.77 for both Sociotropy and Autonomy, compared with test-retest correlation coefficients for depressed mood of 0.24 (Hamilton Rating Scale for Depression; HRSD) and 0.42 (BDI). The authors concluded that the scales assessing the sociotropy and autonomy personality constructs were relatively stable, whereas the HRSD and BDI scores were “comparatively unstable” (p. 771). A second study (Bagby & Toronto, 2001) also found PSI Sociotropy and PSI Autonomy to be “relatively stable” across time, despite significant reductions in depression.

As a consequence of such emergent findings, Zuroff et al. (1999) moved beyond thinking in terms of “pure trait” and “pure state” models and introduced the state-trait vulnerability model. As mentioned earlier, this model accommodates both absolute change and relative stability.

To summarise, very few studies have examined the stability of the personality variables sociotropy and autonomy or dependency and self-criticism (Clark et al., 1999). From those studies that have been conducted, cross-sectional studies have provided support for sociotropy and autonomy and dependency and self-criticism being stable personality constructs. However, these studies have been criticised as being weak tests of the stability hypothesis (Zuroff et al., 1999). Prospective studies have produced mixed results with evidence for and against stability, with sociotropy shown to be less stable than autonomy. More recent research (Bagby et al., 2001; Santor et al., 1997a; Zuroff et al., 1999) has suggested that, whereas personality variables may show an absolute change (demonstrated by significant changes in mean scores between two points of data collection), they may be relatively stable. That is, relative differences between individuals remain the same over time, even in the context of changes in depressed

mood and, to a lesser extent, personality scores themselves. The state-trait vulnerability model of Zuroff et al. (1999) accommodates both absolute change and relative stability.

No study has yet investigated both absolute stability and relative stability of sociotropy and autonomy or dependency and self-criticism as measured by both the SAS and the DEQ. This is important as, looking at just absolute stability or relative stability is, according to recent findings, looking at only half the story (Zuroff et al., 1999). As well as investigating the absolute and relative stabilities of interpersonal and achievement-related constructs, the current study tested the alternative view of Coyne and Whiffen (1995) concerning the hypothesised impact of life events on personality features. Consequently, the next chapter examines the measurement of life events.

CHAPTER 4: MEASURING LIFE EVENTS

Introduction

This chapter provides an historical overview of the development of life event measurement. Problems inherent in the self-report method, such as difficulties in deciding on scale content and defining life events, and retrospective reporting problems such as recall bias, are discussed. An alternative to self-report checklists, namely the interview method, is introduced and compared with the self-report methodology. The quantification of stressful life events is then examined. Two important issues are how to judge the “stressfulness” of an event and whether the effects of different life events are additive.

Historical Overview

The pioneering research of Holmes and Rahe (1967) in developing a self-report measure of life events, the Schedule of Recent Experiences (SRE), has been recognised as highly influential in the study of psychology. Their work features in the books of both Hock and Henniker (1995), “Forty Studies that Changed Psychology: Explorations into the History of Psychological Research” and Banyard and Grayson (1996), “Introducing Psychological Research: Sixty Studies that Shape Psychology”. The major contribution of Holmes and Rahe lay in their efforts to quantify life events, something that had not been done before in a systematic manner. Their initial measure (the SRE) was a 42-item self-report questionnaire representing life experiences commonly reported by subjects that they had previously interviewed. Shortly afterwards, they developed the Social Readjustment Rating Schedule (SRRS; Holmes & Rahe, 1967), which contained almost the same events as the SRE (with the addition of Christmas) but also included numerical weights for each event. These weights or “life change unit” (LCU) scores represented the mean ratings of samples by judges for the amount of *readjustment* an event was likely to require. A person’s total *life stress score* was the sum of these weighted items for the preceding 12 months.

A real “quantum leap” in its time (Paykel, 1983, p. 341), the SRRS and subsequent measures, including more than 20 standardised checklists (Scully, Tosi, & Banning, 2000), have been widely used over the last 20 years (Brown, 1974, 1981; Brown & Harris, 1978; Dohrenwend, Dohrenwend, Dodson, & Shrout, 1984; Gorman, 1993;

Katschnig, 1986). Despite numerous studies documenting problems with the self-report approach (e.g., Brown, 1974, 1981; Gorman, 1993; Monroe & Roberts, 1990; Moos, 1991; Paykel, 1983), this method continues to be used extensively.

In addition to these life event checklists, scales measuring “daily hassles” have also been developed (e.g., The Hassles Scale, Kanner, Coyne, Schaefer, & Lazarus, 1981; The Inventory of Small Life Events, Zautra, Guarnaccia, & Dohrenwend, 1986).

Whereas life event scales measure relatively major life events, often occurring during the preceding 6-month period, daily hassles refer to more day-to-day and minor events such as a one-off dispute with a colleague. It is life events rather than daily hassles that comprise the focus of the current research, with significant life events, especially those involving significant loss, being shown to be especially prominent risk factors for the development of clinical depression (Brown et al., 1987; Brown & Harris, 1989; Coyne & Whiffen, 1995).

Self-report Questionnaires

Self-report checklists have been criticised over the past two decades, and calls for the advancement in the measurement of life events beyond the checklist method are not new (Monroe, 1982). Monroe (1982) described self-report checklists in this area as “misleadingly simple and inadequate” (p. 450) on reliability and validity grounds. He concluded that the “basic psychometric properties of these (self-report) measures do not support their widespread use” (p. 444).

Paykel (1983) viewed the use of self-report checklists as reasonable through the 1970s and early 1980s but stated in his 1983 report that they were no longer adequate. Johnson and Roberts (1995) voiced a similar view in their 1995 review of life events and bipolar disorder. They identified methodological flaws in many studies, including problems with self-report measures such as items being vague and ambiguous, and different types and severities of experiences being represented by singular items. They too suggested that such problems were severe enough to limit the interpretability of any resultant findings.

One problem with self-report checklists is that of defining a life event. Descriptions of life events in checklists are often brief such as “an argument with someone close” or “divorce”. Endorsing such an item gives no indication of the unique qualities of the event. Qualities of life events, such as the magnitude, intensity, duration, unpredictability and novelty, that influence the onset of resultant problems (e.g., depression) are not measured by self-report checklists. In addition, self-report checklists leave it up to the respondents to supply the greater part of the definition (Brown, 1981; Gorman, 1993; Monroe & Roberts, 1990). For example, what is a “serious illness” and who is a “relative”? These definitions are ambiguous and allow considerable room for participants’ idiosyncratic interpretations.

Related to definitional concerns is the concept of event redundancy, whereby the same event is sometimes reported in two different categories on a life event scale (McQuaid, Monroe, Roberts, Johnson, Garamoni, Kupfer, & Frank, 1992; Monroe, 1982). For example, the event “divorce” generally subsumes the events “marital separation” and “changes in relationships with spouse”. Such redundancy has important implications for those checklists that employ weighted scores (such as the SRRS), because final event scores are inflated when weight estimates for overlapping events are added as if separate events.

The threshold for reporting life events is also an issue with self-report checklists. The problem here is determining at what point an ongoing experience becomes an event (Monroe & Roberts, 1990). Gorman (1993) reviewed 12 studies and concluded that self-report checklists often resulted in the over-reporting of trivial life events. For example, in one study, only 39% of events identified on self-report checklists were considered to be significant life stressors once further information was collected by interview (McQuaid et al., 1992). In addition, patient groups have been shown to use a lower threshold in endorsing ambiguous items on self-report checklists than non-clinical groups (Monroe & Simons, 1991).

Despite problems with the self-report approach (e.g., Brown, 1974, 1981; Gorman, 1993; Monroe & Roberts, 1990; Moos, 1991; Paykel, 1983), this method continues to be used extensively. The appeal of the self-report method lies in the ease of administration, the relative ease of data analysis and the low cost involved in

administering checklists to large groups. In addition, the fact that studies involving the self-report method are published regularly is another testament to its continuing appeal.

In response to widespread criticisms of the SRRS and other self-report checklists, some advances with the self-report method have been made. For example, Clark et al. (1992) developed the Negative Experiences Questionnaire (NEQ), a more sophisticated questionnaire that requires respondents to indicate any of the 110 items that have occurred over the last 6 months, with space to add additional events not covered through endorsement. In addition, the NEQ asks respondents to rate their reaction to the events that have occurred, in terms of how upset they were by a particular event and how that event impacted on their relationships with other people and their sense of achievement. However, the majority of research continues to use the more traditional life event checklists, and issues inherent to this approach continue to be problematic. Some of these fundamental issues are now outlined.

Problems with Retrospective Reporting

The majority of life event studies use self-report checklists that ask respondents to identify events that have occurred in the last 6 or 12 months. These retrospective studies rely heavily on the memory of respondents. Potential inaccuracies in recall pose a serious problem for the reliability and validity of retrospective life events measures and research. A discussion of the various types of recall bias follows.

A life event can be completely forgotten. Alternatively, it can be recalled but erroneously remembered (e.g., Loftus & Marburger, 1983). The likelihood of an event being completely forgotten is most likely to occur with traumatic events that happened some time ago. It is less of a problem with life events research that generally focuses on events that have happened in the last 6–12 months. Of more concern is the possibility of an event being erroneously remembered. One common error is “forward telescoping”. The problem here is thinking that an event occurred more recently than it actually did. Thinking that an event happened in the more distant past (backward telescoping) is a less common problem (Bradburn, 1973, cited in Loftus & Marburger, 1983).

Another recall bias is that of “effort after meaning”. Brown and Harris (1989) suggested that memories become systematically biased over time to fit with one’s personal

organising tendencies. This is in line with Beck's cognitive theory (Beck, 1967, 1976), which suggests that schemas influence the way we process information and subsequently affect what we remember. Research has shown that a life event is retrospectively rated as more stressful if it was followed by physical or mental harm. For example, a person who experienced a heart attack following a particular life event is likely to rate that event as more stressful than a person who did not have a heart attack or any other negative physical consequence (Dohrenwend, Link, Kern, Shrout, & Markowitz, 1987). Similarly, a woman who becomes depressed following miscarriage is likely to rate the miscarriage as more stressful than a woman who does not subsequently become depressed. The woman may have rated the event as less stressful prior to knowing of any emotional distress that might follow. Effort after meaning is a type of bias that can cause individuals to shift the timing of events, to attend selectively to certain events, or to elaborate more on certain events to fit better with their view of themselves and their world.

Mood-state dependence is another potential cause of bias with retrospective reporting. Mood-state dependence was discussed in Chapter 3, in relation to the effect of depressed mood on the presence of cognitive-affective structures such as sociotropy or autonomy. Similarly, it has been found that depressed mood can create a bias toward recalling negative life events. For example, when a person is feeling low, they may be more likely to remember a negative event that might have been forgotten on a day when their mood was more positive (Lahey & Heller, 1985). Again, this is in line with Beck's cognitive model of depression (Beck, 1967, 1976), which states that depressed mood activates negative schema that bias individuals toward increasingly negative thoughts and memories, about themselves and the world.

There has been controversy in the life events literature about the existence of a mood-state response bias. Seidlitz and Diener (1993) investigated why happy subjects recalled more positive life events than negative life events compared with unhappy subjects. The suggestion that recall differences between happy and unhappy persons were based on retrieval effects based on current mood was not supported. The overall finding was that there were differences in the actual incidence of positive versus negative events.

Sarason, Johnson, and Siegel (1978) assessed the impact of mood state on responding to a measure of life stress, the Life Experience Survey (LES). They concluded that depressive mood state did not differentially affect responses to the LES. However, Cohen, Towbes, and Flocco (1988) criticised the study on methodological grounds (e.g., small sample size,¹⁷ retrospectively assessing life events over a 1-year period when the reliability of retrospective reporting has been shown to drop substantially beyond the 6-month time frame, and using a life events inventory with little relevance to students). Cohen et al. (1988) set out to correct the weaknesses in the study of Sarason et al. (1978). In their methodologically improved study, a mood-related response bias *was* found on a self-report life events checklist. In particular, depressed mood was associated with better recall of negative life memories and worse recall of positive life memories.

Along with some other issues, a potential negative recall bias due to depressed mood can be minimised with the use of a prospective design where, in at least some cases, event appraisals can be measured prior to the onset of the outcome. In this way, the confounding effects of mood on event reporting can be minimised.

In summary, events can be forgotten, respondents can just not think of an event, they can think an event occurred in a specified time period under study when it happened in the more distant past, they can think that the event was unimportant and therefore not worth reporting or conversely they can inflate the importance of an event due to a subsequent negative outcome for themselves. Also, there may be a negative recall bias during periods of lowered mood.

All of these possibilities threaten the reliability and validity of life event measurement. Additionally, more researchers are concluding that self-report checklists on their own are not adequate (Gorman, 1993; Johnson & Roberts, 1995; Moos, 1991). However, despite these cautions, self-report checklists continue to be used on their own.

¹⁷ $n = 13$, per mood condition.

Life Event Interviews

As an alternative to self-report checklists, life events can be measured using an interview format. The technique of using interviews to measure life events was developed by G.W. Brown. In response to concerns about the SRRS, Brown developed the Life Events and Difficulties Scale (LEDS; Brown & Harris, 1978), an “investigator”-based, semi-structured interview. Subsequent life event interviews (e.g., Hammen et al., 1985; Shrout, Link, Dohrenwend, Skodol, Stueve, & Mirotznik, 1989) have been heavily influenced by the pioneering work of Brown and his colleagues.

The LEDS was first developed to be used with people with schizophrenia and was later used in the area of depression. Interviews are semi-structured and take 3–4 hours. Interviewers question respondents about events that have occurred, including what actually happened, the duration of the event, whether the event was expected, or desirable, whether the respondent had had previous experience with the event, what sort of resources they had for coping with the event, and how the event changed their life. Information about the subject’s social background is also gathered to provide a context within which the event occurred.

Another property of the interview method, such as the LEDS, is an increased ability to combat the problem of accurately estimating the timing of events. G.W. Brown developed the idea of landmarking or anchoring (Brown, 1974). Landmarks or anchors are occurrences such as specific world events or a significant birthday. Participants are then asked to identify such landmarks and then make judgements about whether a life event happened before or after the landmark. Landmarks have been found to improve the accuracy of temporal judgements (Loftus & Marburger, 1983).

Once all relevant information has been gathered by the interviewer, it is presented to a team of raters and a judgement about the stressfulness of each event is made by this team. This judgement about the stressfulness of an event takes into account the specific social context of its occurrence. The resultant judgement is called a “contextual rating of threat”. As the independent raters have no information about the respondent’s psychiatric state or emotional reactions to the life events, this does not impact on their judgements.

The LEDS has been shown to have high reliability (Parry, Shapiro, & Davies, 1981; Tennant, Smith, Bebbington, & Hurry, 1979). The major disadvantage of the LEDS is that it takes a long time to administer and has been referred to as both “lengthy” and “laborious” (Katschnig, 1986, p. 79). Further, it is complex, requiring training in the United Kingdom. To address these criticisms, the LEDS was simplified by Hammen et al. (1985), who developed the Episodic Stress Interview (ESI).¹⁸ In this simpler measure, as with the LEDS, participants continue to be asked about the context in which each event occurred including such factors as social and economic resources. However, the process is briefer than the 3–4 hours required by the LEDS. The ESI was used in the current study and more detail about this instrument is provided in Chapter 8.

Comparison of Self-report and Interview Methods

Self-report checklists, such as that developed by Holmes and Rahe (1967), and more recently developed questionnaires present an individual with a standard list of events and ask which of these events have occurred over a certain period of time. In contrast, as described in the previous section, interviews involve a system of intensive probing by the interviewer concerning the circumstances surrounding an event to rate contextually the significance of events.

Katschnig (1986) directly compared the SRRS (checklist) and the LEDS (interview) and cross-validated the information elicited from the two questionnaires in a group of 147 depressed inpatients. The SRRS and the LEDS were administered once the depression had remitted so that the depressed mood did not influence the recall of life events. Patients first filled out the SRRS, which inquired about the occurrence of 42 life events in the four consecutive 6-month periods prior to admission. The LEDS interview was carried out immediately after the patient had completed the SRRS and covered the same time period. The expected effect of administering the two instruments directly after one another was an increase in congruency between the two instruments. However, the results showed that the proportion of identical life events picked up by both instruments

¹⁸ The ESI is made up of two parts: the Episodic Life Events Interview to assess life events and the Chronic Stress Interview to assess ongoing stresses and difficulties (refer to Chapter 8).

was very low. For the proximal 6-month period, only 131 of a total of 235 life changes elicited in both trials (55.7%) were identically reported on the first and second occasions. For the distal 6-month period, only 39.7% of all life changes were identical in both trials. Hypothesised reasons for these “astonishing discrepancies” (p. 90) were inexact dating of events on the SRRS and “effort after meaning” (Brown & Harris, 1989, see earlier in chapter). Katschnig (1986) concluded that researchers “refrain from continuing to use self-report checklists with predetermined life stress values” (p. 79).

Gorman (1993) reviewed 12 studies that compared the strengths and weaknesses of checklists and interviews.¹⁹ All of these studies were interested in the relationship between life events and psychological disorders. Gorman concluded that the interview method was “far superior” (p. 71) in identifying those events that are truly stressful. The primary reason he gave was that interviews typically assessed event severity using the contextual judgement of the investigator, rather than simply basing it on the subject’s own appraisal.

More recently, using a prospective design, McQuaid, Monroe, Roberts, Kupfer, and Frank (2000) again demonstrated that results from a self-report checklist and an interview measure (LEDS) produced very different conclusions in predicting remission in a group of 91 depressed outpatients. Whereas severe life events identified from the interview measure predicted likelihood of remission, severe life events from the checklist did not.

As discussed previously, one reason why the checklist method continues to be used is no doubt because of its apparent ease. Gorman (1993) acknowledged that checklists may be adequate for studies such as large-scale social surveys, where highly precise data on life events may not be necessary. However, he made the additional point that, in other areas of scientific inquiry “... the choice of method would probably be made according to which technique seemed most promising in terms of advancing knowledge” (p. 72). This view is shared by Duggal, Malkoff-Schwartz, Birmaher, Anderson, Matty, Houck, Bailey-Orr, Williamson, and Frank (2000), who assert that investments in time and resources inherent in the interview method are critical to a

¹⁹ In each case, the interview technique used was the LEDS (Gorman, 1993).

sound investigation of the nature of stressful events and their relationship to the course of psychopathology. Whereas some researchers believe that improvement in self-report measures could improve the validity and reliability of data collected, Monroe and Roberts (1990) believe that the interview method is essential to handle the complex information needed to make sense of life stress.

One major difference between self-report questionnaires and interviews is how the stressfulness of an event is quantified. Obviously, all life events are not equal in the impact they have on a person and it is useful to quantify stress in some way, distinguishing more stressful events from less stressful events.

Quantification of Stressful Life Events

Are Life Events Additive?

There has been some debate over the issue of whether life events are additive in their effects. The question here is, do the effects of different stressful life events sum in their impact? As already described, Holmes and Rahe (1967) attempted to quantify stress by adding predetermined weights to derive a total score. Their life change unit (LCU) score is determined by summing the weighted values of all events over a period of time. Zimmerman (1983) claimed that the major contribution of Holmes and Rahe (1967) was in establishing a "procedure of magnitude estimation to quantify the stressfulness of an event" (p. 30). He examined the relationship between unweighted and weighted life event indices and then examined whether the stress-illness relationship was higher when group-derived consensual weights were employed. However, after examining 18 studies, Zimmerman concluded that weighted and unweighted life event scales performed equivalently.

The procedure of Holmes and Rahe (1967) of LCU scores has additionally been criticised, one problem being that total weighted scores are partly determined by the number of events reported. This is particularly problematic when more than one item relates to the same event (event redundancy), as the resultant additive score may be artificially inflated (Paykel, 1983). Another problem with simply adding the weighted scores emerges from the research of Brown and Harris (1978). They consistently found that the occurrence of a single severe event was more of a risk factor for depression than

the accumulation of less severe events. Contrary to this finding, the procedure of Holmes and Rahe (1967) meant that a number of less severe events were counted as more stressful than a single severe event. More recently, Coyne and Whiffen (1995) have criticised Hammen (Hammen et al., 1985; Hammen & Goodman-Brown, 1990) for using summary scores of the total stressfulness of recent life events. As mentioned, this allows a number of less severe events to be counted as more stressful than one single severe event.

Judging the Stressfulness of Events

Personal, Subjective Judgements

The method of asking participants “how stressful was that event for you?” seems to be obvious and straightforward. This practice is referred to as the *subjective rating of events* or *subjective judgements*. However, this approach is controversial and less widely used in life events research than might be imagined. One concern of this approach, as discussed earlier, is that of “effort after meaning” (Brown & Harris, 1989; Dohrenwend et al., 1987). An example of this would be when a person might rate an event as more stressful if they subsequently become depressed. Effort after meaning usually results in an over-reporting of negative life events (Katschnig, 1986).

However, Snyder, Ford, and Harris (1987) believe that the perceptual processes and how people actually define negative life events *should* play a central role in defining life events. They define a negative life event as “an incident or a sequence of incidents, that is perceived as being the cause ... of physical and (or) psychological pain” (Snyder et al., 1987, p. 7). They give examples of how an outsider might not understand how a particular incident might generate considerable pain without being viewed through the eyes of the perceiver. They go on to point out that what might be a relatively benign event for one person may be a negative life event of major proportion for another. They conclude that the magnitude of a negative life event depends as much upon the perception of the person as it does on some objective ratings of severity. Zimmerman (1983) also criticised the SRRS for ignoring individual perceptions of events.

Contextual Judgements of Threat

As discussed earlier, contextual judgements of threat (developed by Brown & Harris, 1978) are judgements about the stressfulness of an event, made by an independent team of researchers, taking into account the specific social context of the event's occurrence. Although the research team can ask questions about the specific details of an event and a person's life, they have no information about the respondent's psychiatric state or emotional reaction to the event.²⁰ Overall, estimating the amount of stress through the use of contextual judgements of threat is widely accepted as an improvement in the quantification of life stress (e.g., Hammen et al., 1985; Monroe & Roberts, 1990).

To review to this point, the congruency hypothesis suggests that personality styles and the specific type of life stress experienced by an individual are both important variables that in combination may leave a person vulnerable to depression. Congruence between personality type (interpersonal versus achievement based) and life events (interpersonal versus achievement based) results in increased likelihood of depression. Measurement of sociotropic-autonomous and dependent-self-critical personality styles was outlined in Chapter 2. This chapter examined life event methodologies. Next, in Chapter 5, the process of classifying life events as being interpersonal or achievement related is examined.

²⁰ This information is, of course, known to the interviewer but they do not share it with the rest of the research team.

CHAPTER 5: CLASSIFICATION OF LIFE EVENTS

Introduction

Integral to the congruency hypothesis is the assumption that life events can be classified as either sociotropic or autonomous. This chapter questions this assumption and suggests that simple taxonomies classifying events as sociotropic or autonomous are inadequate and misleading. Instead, individuals may respond to different aspects of stressful events and interpret them as sociotropic or autonomous depending on their worldview and, in particular, on their sociotropic or autonomous tendencies.

The Classification of Life Events as Interpersonal or Achievement Related

As stated throughout this thesis, the congruency hypothesis (Beck, 1983, 1987) proposes that individuals are more likely to become depressed if they experience a negative life event that is congruent with their personality. Inherent in this theory is the idea that life events themselves can be classified as being either sociotropic (interpersonal) or autonomous (achievement related). Examples of sociotropic life events would be marriage and divorce or separation. Conversely, an autonomous life event would be one that concerned achievements, such as a job promotion or demotion.

Most studies investigating the congruency hypothesis decide a priori which life events are interpersonal and which are achievement related. For example, in Robins (1990, Study 1), the Schedule of Recent Experiences (SRE; Holmes & Rahe, 1967) was used to assess stress in a group of depressed patients. Events were categorised by two judges as relating to either interpersonal or achievement concerns. This resulted in eight items being categorised as interpersonal and five items being categorised as autonomous. There was one item where there was not agreement, but this was “resolved with discussion” (p. 394). Clark et al. (1992) developed the Negative Experiences Questionnaire (NEQ) to be used in research on the congruency hypothesis. They chose events with “a clear sociotropic and autonomous orientation” (p. 642). Life events were classified as sociotropic or autonomous based on the ratings of three judges, “all experienced researchers in the area of cognitive vulnerability” (Clark et al., 1992, p. 641). Of the 104 negative life events, judges unanimously categorised 44 as sociotropic and 46 as autonomous. The remaining 14 items were considered to be ambiguous and were therefore excluded from the analysis.

Despite the emphasis placed on interpretive processes in Beck's model of depression (Clark et al., 1992), very few studies in this area have taken into account the meaningfulness of life events to individuals. Recently, it has been suggested that life events may not be inherently sociotropic or autonomous. Instead, individuals may perceive a life event across various domains as congruent with their personality style (Abramson et al., 1997; Gotlib & Hammen, 1992). For example, a highly sociotropic or dependent person who is fired from their job may respond to the social rejection component of this event (e.g., the loss of association with co-workers) rather than the more obvious achievement-related concern. The seemingly autonomous event of being fired from a job may therefore be experienced as having more in the way of sociotropic consequences by some individuals. From this view, such a reaction would be more likely if the individuals were highly sociotropic and hence more likely to perceive the event as relating to their area of concern. Similarly, Rempel, Holmes, and Zanna (1985) gave the example of self-critical (autonomous) women who maintain romantic relationships because of a desire to attain extrinsic rewards such as social status and respect, rather than the more expected interpersonal rewards such as emotional closeness. Women high on self-criticism have been shown to describe their boyfriends as high on needs for achievement and masculinity, rather than on more emotional or interpersonal aspects (Blatt & Zuroff, 1992).

Other authors have also highlighted the pitfalls of a priori or predetermined classification of life events (e.g., Abramson et al., 1997; Clark et al., 1999; Ingram, Miranda, & Segal, 1998; Kwon & Whisman, 1998; Robins et al., 1995). Abramson et al. (1997) point out that, whereas sociotropic and autonomous personality styles are defined in terms of psychological needs and concerns, life events are not. They suggest that a simple taxonomy of sociotropic (interpersonal) or autonomous (achievement) events is not adequate for testing the congruency hypothesis. Similarly, Robins et al. (1995) concluded that the predetermined classification of events as sociotropic or autonomous is a serious barrier to the validity of findings in this area. Instead, they proposed that it is interpretations that mediate emotional reactions to life events. They suggested that future studies might benefit from including both objective measures of events and subjective interpretations. In line with this, Clark et al. (1999, p. 77) stated that "it is this meaning-making capability that cognitive theory considers central to the

human organism's adaptation to the environment". Clark et al. (1999) also concluded that taxonomies are arbitrary and weaken the validity of studies.

The research of Robins et al. (1990) was one of the first studies to consider the importance of participants' perceptions of life events. They hypothesised that the relationship between depression, dysfunctional attitudes (DAS scores) and life events would be mediated by participants' perceptions of life events. They developed the Perceptions of Events Questionnaire for subjects to rate their perceptions of the most upsetting event (previously identified from the SRE). Participants rated aspects of the event such as the upsettingness of the event, the degree of resulting life change and control over the effects of events. Their results supported the hypothesis that perceptions of events mediate the relationships of depression to dysfunctional attitudes and negative events and their interaction. However, they did not investigate the process of rating events as interpersonal or achievement related, as this was not the focus of the study.

In another study, Robins (1990, Study 2) required students to themselves classify the primary impact of each event as in either the interpersonal domain or the achievement-autonomy domain. They then rated the level of positive or negative impact (from -3 to +3). High sociotropy-low autonomy and high autonomy-low sociotropy groups were identified. Analysis indicated that high sociotropy groups reported more negative social events than negative autonomous events. Also, the participants in the high autonomy group reported more negative autonomy events than negative social events. However, the differences here were not significant, possibly due to the small sample size (for the high sociotropy-low autonomy group, $n = 7$; for the high autonomy-low sociotropy group, $n = 8$).

The study of Clark et al. (1992) also required participants (university students) to rate the impact of an event in terms of interpersonal versus achievement impact. Clark et al. hypothesised that personality would interact with "event appraisals" to predict dysphoria. They developed a list of negative life events (from the NEQ; Clark et al., 1992) that required participants to rate the perceived loss in social resources and personal control. As discussed earlier, three independent judges had already unanimously categorised 44 of the items as sociotropic and 46 of the items as

autonomous (the remaining 14 items were considered to be ambiguous and were excluded). For each negative life event, university students were asked to rate the “degree of general upset” as well as the “perceived loss of interpersonal resources” (sociotropic impact) and the “perceived loss of goals and independence” (autonomous impact). Hence, whereas events had been classified a priori as either sociotropic or autonomous by external judges prior to the study, participants also rated the degree of sociotropic and autonomous impact of the events. The main findings of the study were that sociotropy significantly interacted with negative sociotropic but not autonomous events to predict depressed mood and that autonomy failed to show any significant relationship with depressed mood. Also, through analysis of the participants’ ratings of “perceived loss of interpersonal resources” and “perceived loss of goals and independence”, it was found that dysphoric participants rated the sociotropic events as involving more perceived interpersonal loss, compared with non-dysphoric participants. However, this study also did not address the issue of whether participants’ ratings of interpersonal and achievement loss matched up with the judges’ a priori classification of events as either interpersonal (sociotropic) or achievement oriented (autonomous). Although this would have been possible (by comparing the participants’ ratings of the sociotropic or autonomous impact of events with the predetermined sociotropic and autonomous classification made by the independent judges), it was not the focus of the study and therefore was not investigated.

A study by Raghavan, Le, and Berenbaum (2002) went some way towards addressing the concerns of a priori classification. Raghavan et al. used the Structured Event Probe and Narrative Rating Interview (SEPRATE; Dohrenwend, Raphael, Schwartz, Stueve, & Skokol, 1993) to predict dysphoria and hostility in a group of 39 women. Their methodology included taped recordings of stress narratives that were then coded by trained undergraduate research assistants who categorised each stressor as relating to the interpersonal or achievement domain. To aid the categorisation process, a theoretical taxonomy of what defined a stressor to be achievement oriented or interpersonal was constructed. Stressors were defined as achievement related if they were “predominantly characterized by issues of self-control, self-gratification, self-maintenance, and pursuit and attainment of non-interpersonal goals” (p. 236). Stressors were defined as interpersonal if they were “characterized by concerns, needs, motivations, and cognitions that were interpersonally focused” (p. 236). In order for a classification to

be made, two out of the three raters had to agree (i.e., it was not required that it be unanimous). Clearly this study broke away from using a priori classifications of life events and included contextual factors investigated during the interview to classify events as sociotropic or autonomous. However, it still used external classifications that followed the more traditional sociotropic or autonomous themes and assumptions were still made about what defined an event as sociotropic or autonomous. The results of the study showed that a sociotropic personality combined with interpersonal stressors predicted dysphoria, whereas autonomy combined with achievement stressors predicted hostility.

Calls for further studies to look more directly at the interpretation of stressors have been made (Abramson et al., 1997; Allen et al., 1996; Robins et al., 1995). Although Clark et al. (1999) acknowledged that the introduction of event appraisals adds to the complexity of the diathesis-stress research designs, they concluded that research must begin to consider event evaluation in order to provide a full and accurate test of the cognitive theory. Following this call, the validity of classifying events a priori as either sociotropic or autonomous was directly tested for the first time in this study.

CHAPTER 6: THE CONGRUENCY HYPOTHESIS: RESEARCH AND METHODOLOGICAL IMPLICATIONS FOR THE CURRENT STUDY

Introduction

The two components that contribute to the congruency hypothesis, namely personality and life events, have been discussed in Chapters 2–5. This chapter reviews the findings of studies that have tested the congruency hypothesis itself.

The Congruency Hypothesis

The work of Brown and Harris (1978) greatly increased the sophistication in the way that life stress was measured. However, despite improvement in the measurement of stress, correlations between stress and depression continued to remain modest (Hammen et al., 1985). Disappointing findings related to prediction of depression following stressful life events led Hammen et al. (1985) to consider the need for a more differentiated model. Hammen and her colleagues called for the bringing together of life stress research with research concerning the cognitive model of depression. One cognitive diathesis-stress model is of course organised around the congruency hypothesis (Beck, 1983, 1987). In this model, exposure to a congruent life event is thought to activate a cognitive schema that in turn has dysphoric-mood-eliciting qualities. Over time, this schema may become more “sensitised” and begin to exert an increasingly intrusive influence on an individual’s information processing, leading to quicker and increasingly unsubstantiated conclusions regarding specific life events (Zuroff & Mongrain, 1987).

Taken together, investigations of the congruency hypothesis have produced mixed results. However, in comparing the two personality styles, greater support for the congruency hypothesis has been found for sociotropy or dependency compared with autonomy or self-criticism. Nietzel and Harris (1990) conducted a meta-analysis²¹ reviewing three aspects of the congruency hypothesis. Included were the following: first, the instruments used to measure interpersonal and achievement vulnerabilities (see Chapter 2); second, the magnitude of relationships between these vulnerabilities and

²¹ The meta-analysis was described in Chapter 2, and included literature from 1976 (when the DEQ was developed) until 1989.

depression were assessed (see Chapter 2); third, whether dependent and autonomous needs pose a direct susceptibility to depressive states or whether they must interact with negative life experiences to produce a risk factor. It is this third aspect of the meta-analysis, namely the testing of the congruency hypothesis, that is of interest here. Although 21 studies were included in the overall meta-analysis, Nietzel and Harris were able to locate only five empirical studies related to this third aspect of the analysis²² (Hammen et al., 1989b; Hammen et al., 1985; Robins & Block, 1988; Smith et al., 1988; Zuroff & Mongrain, 1987).

Owing to this relatively small number of studies, Nietzel and Harris (1990) reviewed the studies qualitatively. Four out of the five studies supported the congruency hypothesis for an interpersonal personality style; that is, dependency needs in combination with negative social events were related to depression (Hammen et al., 1989b; Hammen et al., 1985; Robins & Block, 1988; Zuroff & Mongrain, 1987). The exception was Smith et al. (1988) who found no support for the congruency hypothesis with regard to dependency in a group of 188 undergraduate students. The study of Hammen et al. (1989b) was the only study to support fully the congruency hypothesis for autonomy²³; that is, self-criticism in combination with negative achievement events were related to depression. Nietzel and Harris (1990) point out that the study of Hammen et al. (1989b), the only study to support fully the congruency hypothesis for both interpersonal and achievement-related vulnerabilities, was also the only study with depressed patients as its participants. The participants in the other four studies were students, whom Nietzel and Harris (1990) suggested were more likely to support the congruency hypothesis for the interpersonal constructs. They are more likely to have a greater proportion of developmental issues around sociotropic/dependent themes than depressed participants.

Several additional explanations have been offered for the generally negative results for the congruency hypothesis in terms of autonomy. Segal, Shaw, and Vella (1989) suggested that the reason for this might be that autonomy/self-criticism is less "elaborated" (p. 397) than sociotropy/dependency at both a theoretical level and an

²² Two out of the five studies investigated the congruency hypothesis for sociotropy and autonomy (Hammen et al., 1989b; Robins & Block, 1988) and the remaining three studies investigated the congruency hypothesis for dependency and self-criticism (Hammen et al., 1985; Smith et al., 1988; Zuroff & Mongrain, 1987).

²³ As already mentioned, the Hammen et al. study also supported the congruency hypothesis for sociotropy.

operational level. For example, they stated that the concurrent validity and internal reliability of self-criticism was much weaker than for dependency. They suggested that this reflected a definitional problem, which could be addressed only by constructing a new scale for measuring achievement-related concerns. Another explanation has been that interpersonal events may have more immediate impact, whereas achievement-related events might be experienced as more insidious and cumulative in their effects (Elliot & Eisdorfer, 1982; Segal & Dobson, 1992). It has been noted that interpersonal events tend to reflect more instances of discrete loss (broken engagement, divorce, death of a spouse, marital infidelity, miscarriage or still birth). Achievement events on the other hand might reflect instances of bad conditions that are further deteriorating (problems at school, change of one job for a worse job, demotion at work, business failure, taking on a larger workload, moving to a worse residence or neighbourhood, going on welfare). When considering the fact that greater support has been found for the congruency hypothesis for sociotropy or dependency compared with autonomy or self-criticism, Blatt and Zuroff (1992) speculate that it might be a consequence of the fact that dependent individuals are at a lower developmental level (Blatt, 1974) and are therefore particularly vulnerable to concerns about interpersonal loss. In contrast, self-critical individuals may be at a higher developmental level, and may consequently be more responsive to a wide range of concerns including issues about loss as well as failure.

In terms of studies done after the Nietzel and Harris (1990) review, Coyne and Whiffen (1995) reviewed a number of studies. They identified four studies (across five samples) that tested the congruency hypothesis retrospectively using one point of data collection. All but one of these samples (Robins, 1990, Study 1) consisted of college students. The findings supported the congruency hypothesis for sociotropy or dependency in four out of the five samples (Clark et al., 1992; Robins, 1990, Study 1; Robins & Block, 1988; Rude & Burnham, 1993) with the one exception being Robins (1990, Study 2). None of the studies supported the congruency hypothesis for autonomy or self-criticism.

Coyne and Whiffen (1995) identified nine further studies that tested the congruency hypothesis using a longitudinal design (Hammen et al., 1985; Hammen, 1992; Hammen, Ellicott, & Gitlin, 1989; Hammen et al., 1989b; Hammen & Goodman-Brown, 1990; Lakey & Ross, 1994; Mongrain & Zuroff, 1994; Segal et al., 1989; Segal, Shaw, Vella,

& Katz, 1992). After reviewing these studies, they concluded that the evidence from longitudinal studies to support the congruency hypothesis was at best ambiguous. They suggested that problems such as small sample sizes, discarding participants who did not fit the criteria for pure personality types (see section on methodological issues below) and data analytic techniques made the interpretability of the findings difficult. They identified the longitudinal study of Segal et al. (1992) as the only study with a sufficient sample size ($n = 59$ with all participants²⁴ being retained throughout the study) and appropriate data analytic techniques. Interestingly, and contrary to most studies, the main findings of the study of Segal et al. (1992) supported the congruency hypothesis for the achievement-related factor but not the interpersonal vulnerability factor.^{25,26}

More recently yet, Clark et al. (1999) reviewed additional studies on the congruency hypothesis. They separated out depression onset from depression recurrence. When considering depression onset, they concluded that, based on all studies done to date, “consistent support for cognitive personality-event congruence has eluded researchers to date” (p. 309). They cautioned concluding that evidence is stronger for a congruence between sociotropy and negative interpersonal events than between autonomy and negative achievement-related events. The reason for this is that, as reviewed by Clark et al. (1999), sociotropy has shown a significant interaction not only with negative interpersonal events (as predicted by the model) but also with negative achievement events (not predicted). For example, Hammen, Adrian, and Hiroto (1988) found that SAS Sociotropy interacted with both congruent (interpersonal) and non-congruent (achievement) events to produce depression. SAS Autonomy interacted with neither.

Clark et al. (1999) also reviewed studies of dependency and self-criticism (as measured by the DEQ) separately from sociotropy and autonomy. They found evidence to support a personality-event congruency between dependency and negative interpersonal events, but self-criticism was associated with both interpersonal and achievement events (Lakey & Ross, 1994; Zuroff & Mongrain, 1987).

²⁴ Participants were remitted depressives.

²⁵ When they included only data from 2 months before relapse, some evidence of a congruency effect among participants with dependent concerns was obtained.

²⁶ The study of Segal et al. (1992) used subscales from the DAS (Need for Approval and Performance Evaluation subscales) to operationalise Beck's and Blatt's interpersonal and achievement-related constructs.

When reviewing depression recurrence, Clark et al. (1999) referred to the findings as “quite ambiguous at the present time”, with SAS and DAS subscales producing “rather fragile interactions between personality and life events” (p. 331). They concluded that there is sufficient empirical support to warrant continued research in this area, but highlighted the “substantial” methodological and conceptual weaknesses and limitations of the research” (p. 331; see also next section).

Bartelstone and Trull (1995) concluded that methodological difficulties, such as small sample sizes, differences in the types of measures used, and issues to do with design and statistical analysis, preclude a definite conclusion regarding the veracity of the congruency hypothesis. Similarly, underpinning the rationale for the current dissertation, Clark et al. (1999) concluded that “conceptual and methodological shortcomings of the cognitive diathesis-stress research ... may be why many of these studies have not provided a fair or even adequate test” (p. 319). Conceptual issues have been covered in this and previous chapters. Methodological issues are expanded on below.

Methodological Considerations

Research investigating the congruency hypothesis is full of methodological concerns and caveats. Concern has been raised over small sample sizes, the predominance of student samples, inadequate assessment of depression and life events, and inadequate data analytic techniques. Although these concerns have been discussed at times primarily in the context of individual studies, such methodological concerns are now considered more systematically and are summarised here for reader convenience.

Participants

Research on the congruency hypothesis has been criticised for using predominantly university students rather than clinical samples (Coyne & Whiffen, 1995; Nietzel & Harris, 1990; Segal et al., 1992; Zaretsky et al., 1997). Such studies have measured self-reported depressive symptoms (usually based on BDI scores) rather than the occurrence of clinical depression (Coyne & Whiffen, 1995). Coyne and Whiffen acknowledge that research using university students is an important first step in testing and refining hypotheses that will later be examined with clinical populations. However, they caution

against generalising based on studies using students. They suggest that recently remitted depressive patients are a much more suitable sample than university students or even currently depressed outpatients. They see them as particularly apt because the heightened risk of subsequent depression makes it more likely that substantial and practically useful results can be obtained.

An important methodological procedure concerning remitted depressive samples is to ensure that all participants in the study are not depressed at Time 1. Although this may sound obvious, Robins et al. (1995) purposefully selected individuals who scored 14 or above on the BDI at Time 1, a score that puts participants potentially in at least the mildly depressed range (Beck et al., 1979b).

The issue of small sample size has been raised as another general problem (Clark et al., 1992; Coyne & Whiffen, 1995; Nietzel & Harris, 1990). Clark et al. refer to “many” of the studies researching the congruency hypothesis as having “very small sample sizes” (p. 638), which obviously limits the power of any analyses conducted. For example, in the only study identified in the meta-analysis of Nietzel and Harris (1990) to use a clinical sample (Hammen et al., 1985), there were 22 participants. Student samples in the other four studies reviewed by Nietzel and Harris were larger (n ranged from 30 to 98).

Self-reported versus Interview-based Measures of Depressed Mood

Self-reported depressed mood as measured by inventories such as the BDI have been shown to be conceptually and empirically different from diagnosable clinical depression (Coyne & Whiffen, 1995). First, research has shown that less than a third of participants in non-clinical samples who scored above the depressed cut-off points on self-reports met the criteria for major depression (Fechner-Bates, Coyne, & Schwenk, 1994; Myers & Weissman, 1980, cited in Coyne and Whiffen, 1995). In addition, most participants scoring above depressed cut-off points do not report a duration of mood disturbance of at least 2 weeks, as required for a diagnosis of depression (Coyne & Schwenk, 1994, cited in Coyne & Whiffen, 1995). Despite these differences, the majority of the research on the congruency hypothesis continues to use self-report measures of depressed mood, usually the BDI, with university students. Clark et al. (1992) point out that the congruency hypothesis was formulated to account for individual differences in the

occurrence of depression, not in the intensity of depressive symptoms as measured by the BDI. As mentioned earlier, only one of the five studies reviewed by Nietzel and Harris (1990) measured depressive severity using a diagnostic interview format.²⁷ Coyne and Whiffen (1995) point out that there is an important statistical consequence of using self-reported depressed mood, rather than interview-based judgements. In particular, self-reported distress has stronger relationships than clinical depression with normally distributed personality variables. This is because the size of a correlation coefficient is constrained by the similarities in the distributions of the two variables involved, and because elevated scores on self-report inventories are more prevalent than diagnosable depression. This results in the size of correlations between personality variables and self-reported depressed mood being greater than for those between personality variables and clinical depression. In addition, if diagnosable depression is the variable chosen in a study, the number of participants that would be expected to be clinically depressed, even in a remitted sample, would be expected to be low (Coyne & Whiffen, 1995).²⁸

Inadequate Assessment of Stressful Life Events

The methodological concerns in measuring life stress are detailed in Chapter 4. Repeated concerns have been raised about the reliability and validity of life stress measurement (Clark et al., 1999; Coyne & Whiffen, 1995; Duggal et al., 2000; Gorman, 1993; Monroe & Roberts, 1990; Monroe & Simons, 1991; Simons, Angell, Monroe, & Thase, 1993). Life event checklists continue to be used frequently, despite repeated concerns about their reliability and validity. The exception is Hammen and her colleagues (Hammen et al., 1985) who developed the Episodic Life Events Inventory based on the methods of Brown's contextual threat assessment (Brown & Harris, 1978). However, Hammen has been criticised for aggregating life event scores by summing items (e.g., Hammen et al., 1985; Hammen & Goodman-Brown, 1990). One problem with aggregating life event scores is that the resultant stress score is partially dependent on the number of life events reported (see Chapter 4). Additionally, this method does not take into account the fact that one severe life event is more likely to result in

²⁷ Participants had to be assessed at admission by both a psychologist and a psychiatrist and had to meet *Diagnostic and Statistical Manual of Mental Disorders – Third Edition (DSM-III)* (American Psychological Association, 1980) criteria for a non-bipolar major depressive episode.

²⁸ The number of participants in the current study that met diagnosable or self-report cut-off thresholds was minimal (see Chapter 9). This highlights this fundamental concern in the testing of the congruency hypothesis.

depression than a series of less severe events (Coyne & Whiffen, 1995). A strength of the interview method over self-report checklists is the ability of interviews to identify severe life events, but this advantage is lost if scores are then just aggregated. An alternative to aggregating scores would be to use mean stress scores. Another problem with the measurement of stressful life events is the practice of life events being classified as sociotropic or autonomous by predetermined taxonomies. As outlined in Chapter 5, this practice is questionable (Clark et al., 1999).

Data Analysis

Of primary concern here are the different techniques used to analyse SAS and DEQ data (see review by Coyne & Whiffen, 1995). For example, Firth-Cozens (1992) separated participants into three groups based on self-criticism scores – high self-criticism (scores above the 75th percentile), low self-criticism (scores below the 25th percentile) and moderate self-criticism (all remaining participants). Although this methodology has some intuitive appeal, it makes it difficult to compare the results from different studies, as the cut-off points are determined on the basis of the distribution of scores in the particular sample. Coyne and Whiffen (1995) see the use of such cut-off points as posing “a substantial barrier to meaningful integration and generalization across studies” (p. 360). They point out that the use of cut-off points changes the level of measurement from interval to ordinal. This practice results in individuals who score above a cut-off point being treated as identical, regardless of potentially large differences in their scores. In addition, individuals who are close in score but separated by the cut-off point are also treated as different. Clark et al. (1999) agree with Coyne and Whiffen (1995) on this issue, and suggest that the dimensional nature of personality constructs should be retained.

Although Hammen and colleagues have used life event interviews, they have also categorised participants as predominantly sociotropic or autonomous (Hammen et al., 1989). They considered participants to be sociotropic if the Sociotropy score exceeded the Autonomy score by more than 3 points, and the reverse for Autonomy. Two out of the 22 unipolar participants in that study had to be omitted from analyses because their scores on the SAS Sociotropy and SAS Autonomy subscales were similar. Similarly, individuals who are high on both sociotropy/dependency and autonomy/self-criticism have typically been discarded from data analysis in many studies (Coyne & Whiffen,

1995). This has resulted in “substantial numbers” (p. 360) of participants being excluded from analyses and, in Coyne and Whiffen’s view, undermines subsequent analyses.

To summarise, many studies researching the congruency hypothesis have been criticised on methodological grounds. Haaga et al. (1991) concluded that no study at the time had incorporated all the conditions necessary to adequately test the congruency hypothesis. This view was shared by Clark and his colleagues in 1999 (Clark et al., 1999). Given these problems, along with potential problems with underlying assumptions, this study’s purpose was to test not the congruency hypothesis but rather the major underlying assumptions. Importantly, it was designed to incorporate methodological suggestions across the areas that have been considered to be problematic.

CHAPTER 7: AIMS AND OBJECTIVES

Introduction

This research aimed to test three of the underlying assumptions on which the congruency hypothesis (Beck, 1983, 1987; see also Blatt, 1974, 1982) is based. The main focus of the research (Question 2 and Question 3) investigated two major assumptions: the state-like or trait-like nature of Blatt's and Beck's personality constructs, and the validity of the current practice of classifying life events, *a priori*, as either sociotropic/dependent or autonomous²⁹/self-critical. While researching these questions, it became evident that in Blatt's view (Blatt, 1974, 1982; Blatt & Zuroff, 1992), there were two very clear precursors to the two personality types, dependency and self-criticism. For this reason, an additional question was added to the research. This was to investigate the hypothesised relationship between dependent and self-critical personality styles and their relationship to childhood experiences of parenting (Question 1). In addition, methodological problems relating to this area of research were addressed.

Question 1. Developmental Origins of Dependency and Self-criticism

As outlined in Chapter 2, Blatt's theory states that dependency and self-criticism are independent and enduring personality styles that arise from different early childhood experiences (Blatt, 1974, 1982; Blatt & Zuroff, 1992). Overall, a consistent picture of the development of dependency and self-criticism to support Blatt's theory has not emerged. There has been a call for further research on the extent to which particular types of parenting are differentially associated with both interpersonal and achievement-related personality styles, particularly with clinical samples (Mendelson et al., 2002). Accordingly, the first research question is as follows.

1. Developmental Origins of Dependency and Self-criticism

Are childhood experiences of parenting associated with the development of dependency and self-criticism?³⁰

²⁹ In line with research recommendations, the current research operationalises autonomy into two subfactors: solitude and independence, using the Sociotropy and Autonomy Scale, Revised.

³⁰ Because it was Blatt, not Beck, who theorised about the developmental origins of dependency and self-criticism, only Blatt's personality constructs were investigated.

Question 2. Social Context and Personality

As discussed in Chapter 3, the view that Blatt's and Beck's constructs are stable, trait-like features of personality was seen by Coyne and Whiffen (1995, see also Clark et al., 1999) as an assumption and not a tested hypothesis. Instead, they considered that social, contextual factors could equally account for the degree of sociotropy/dependency or autonomy/self-criticism evident in an individual at any one point in time. For example, the situation of an insecure intimate relationship with an uncertain future could engender dependency and reassurance seeking. Such a situation might lead a person to describe himself or herself quite differently from how they would at other times in their lives. They concluded that sociotropy and autonomy scores and dependency and self-criticism scores "may thus reflect the difficult life circumstances that are currently faced by a person, as well as stable, trait-like dispositions that researchers assume they are tapping" (p. 367). Although Beck's theory allows for some flexibility in the presentation of sociotropy and autonomy in relation to contextual factors (latent and inaccessible schemas may be activated by depressed mood or specific social contexts, such as interpersonal rejection (Clark et al., 1999)), Coyne and Whiffen (1995) criticised this position as being "unfalsifiable" (p. 365).

Partially speaking to the issue, initial studies looking at the issue of the stability of these personality variables focused on "absolute" stability, by examining the significance of mean changes over time. However, more recent research has looked at the "relative stability" of personality constructs using correlational analyses. These studies have investigated the relative stability of Neuroticism and Extraversion (Santor et al., 1997a), DAS subscales (Zuroff et al., 1999), and PSI Sociotropy and Autonomy (Bagby et al., 2001). No study has investigated the relative stability of dependency or self-criticism on the SAS or the DEQ.

In the current study, both the absolute stability and the relative stability of both Beck's and Blatt's constructs were examined. In addition, the relationship between any changes in personality both alone and in relation to life events was investigated. A prospective design was used and included two separate participant groups: remitted depressives and a university student sample. The remitted depressive participants were chosen (as recommended by Zuroff et al., 1999, and Coyne and Whiffen, 1995) because they were

not currently depressed, but were more vulnerable individuals. A control group of university students was included. This choice is in line with the recommendation of Clark et al. (1995, 1999) that studies need to include both clinical and non-clinical samples, to determine and compare the temporal stability of these constructs across time, situations and clinical state. In addition, such inclusion increases interpretability based on the fact that most previous studies used university student samples.

2. Social Context and Personality

Are dependency and self-criticism, and sociotropy and autonomy trait-like features of personality and to what extent are they influenced by stressful life circumstances?

Question 3. The Classification of Life Events

Coyne and Whiffen (1995) assert that, for sociotropic-autonomous or dependent-self-critical personality styles to be considered a diathesis for depression, not only must they be trait-like, but also life stress must be able to be adequately assessed.

As discussed in Chapter 5, to assess life stress, research on the congruency hypothesis has typically used a list of negative life events classified as inherently sociotropic or autonomous prior to the study. This practice of a priori classification has recently been questioned (Abramson et al., 1997; Clark et al., 1999; Ingam et al., 1998; Kwon & Whisman, 1998; Robins et al., 1995). Robins et al. (1995) raise the possibility that a given event may be interpreted by a highly sociotropic individual as having more interpersonal impact, and by a highly autonomous individual as having more of an impact on their sense of achievement. This puts the focus on an individual's interpretation of a negative event, rather than any intrinsic properties of that event. Similarly, Clark et al. (1999) suggest that predetermined taxonomies are arbitrary and weaken the validity of studies. This gives rise to the third research question.

3. The Classification of Life Events

Can life events be classified a priori according to predetermined taxonomies as interpersonal or achievement related, or does this classification depend on the perceptions of the individual?

Methodological Considerations

Methodological concerns were discussed in Chapter 6. In their seminal review, Coyne and Whiffen (1995) were critical of previous reviews on the congruency hypothesis (e.g., Klein, 1989; Nietzel & Harris, 1990; Ouimette & Klein, 1993; Robins, 1993; Zuroff, Quinlan & Blatt, 1990), suggesting that they skirt “troubling methodological and conceptual issues” (p. 359). As discussed in Chapter 6, other authors have also raised methodological concerns such as small sample size, the predominance of student samples, cross-sectional designs, problems with measurement of life events and personality (Bartelstone & Trull, 1995; Clark et al., 1992; Robins, 1990; Segal et al., 1992; Zaretsky et al., 1997).

In an effort to address these concerns, the current research aimed to adhere to current methodological recommendations in the choice of participants, measures, design and analysis. In particular:

Participants

- a. Participants included both university students and remitted depressives. This allowed direct comparison with previous research, which has predominantly utilised students, but advanced the area by investigating a high-risk population (recommended by Coyne & Whiffen, 1995, and Clark et al., 1999).
- b. The sample sizes recruited were above $n > 60$ participants. The number of remitted depressives ($n = 61$) represents the largest clinical sample ever recruited for a study in this area.³¹ In addition, the sample remaining after 12 months ($n = 41$) reflected some attrition but was nonetheless one of the largest samples to be considered to date.

Measures

- c. The revised and most recent and well-validated versions of the DEQ, SAS and PBI (Parental Bonding Instrument) were used.
- d. Autonomy was operationalised as having two factors (solitude and independence), rather than the unitary construct (autonomy) that has most often been used, despite its questionable validity.
- e. Interview and self-report measures of depressed mood were used.

³¹ This is based on an examination of reviews of the congruency hypothesis (Clark et al., 1999; Coyne & Whiffen, 1995; Nietzel & Harris, 1990). Sample sizes in clinical samples range from 22 (Hammen et al., 1989) to 59 (Segal et al., 1992).

- f. Interview and self-report measures of life events were used (Raphael, Cloitre, & Dohrenwend, 1991).

Design and Procedure

- g. The current methodology did not rely solely on the a priori classification of life events. Instead life events were classified as sociotropic or autonomous in three ways: (i) a priori, in line with a predetermined taxonomy, (ii) subjectively, as rated by participants, and (iii) objectively, as rated by interviewer and external judges. These three methods of classifying life events were compared.
- h. Interviewers questioned widely and systematically over the possible universe of events (Paykel, 1983).
- i. A longitudinal design was used (three time intervals across 12 months).
- j. Recall periods did not exceed 6 months (to minimise serious problems with the adequacy of recall), as recommended by Monroe (1982).
- k. Landmarking or anchoring was used, to help to combat the problem of correctly estimating the timing of events (Loftus & Marburger, 1983).

Analysis

- l. For data analyses, personality scores from the SAS-R and DEQ-McGill were kept as continuous variables, in line with the recommendation of Coyne and Whiffen (1995). This is in contrast to the practice of identifying a pair of “pure types” using sample-based cut-off points, as has widely been done previously.

CHAPTER 8: METHOD

Introduction

This chapter presents the methodology for all three research questions, starting with the ethical considerations. Interviewers and participant groups are then described, including the entry criteria and the screening process for the remitted depressives group. A detailed description of the measures, both interview and self-report, is then followed by the procedure.

Ethical Issues

The research was conducted in accordance with the ethical guidelines of the Massey University Human Ethics Committee, from which ethical approval was granted (see Appendix B).

Informed consent was gained in accordance with the Committee's guidelines. This included providing an Information Sheet and a Consent Form (Appendices C and D) to participants at each point of contact with the researcher (or interviewers). Because the research was longitudinal, it was stressed to participants verbally, and in the Information Sheets, that participation in one part of the research did not mean that participants were obliged to take part in the follow-up parts of the research.

Confidentiality was assured to all participants. Each interviewer signed a confidentiality agreement form prior to the commencement of the interviews (Appendix E). All interviewers were nearing the end of their clinical psychology training and as such were trained in the importance of maintaining confidentiality. All questionnaires and records from the interviews were coded with an identification number. Only the principal investigator (i.e., the author) had access to the master sheet, which revealed the participants' identities.

The research was considered to pose low risk of harm to participants. Although the entry criteria for the study meant that participants were not depressed at the beginning of the study, those who became depressed during the 12-month course of the study were

offered information about how to access local counselling and mental health services (Appendix F).

Interviewers

Interviews were conducted by the principal researcher or by interviewers who were either in their fifth or sixth (final) year of clinical psychology training at Massey University. They had been trained in interviewing skills, assessment of clinical disorders including depression, and ethical and professional issues such as confidentiality and safety. In addition to their clinical psychology training, all interviewers undertook specific training for this study. This included group training sessions followed by individual training by the principal researcher who was a senior clinical psychologist and Assistant Lecturer/Clinical Tutor with the Clinical Psychology Training Programme at Massey University. Individual training included each interviewer sitting in with the principal researcher while she conducted an interview. The principal researcher then sat in on at least one interview of each of the trainees. Interviews were taped and randomly selected and reviewed by the principal researcher ($n = 12$) to monitor quality and to ensure that interviewers were following the interview protocol (Training Manual, see Appendix G). No protocol violations were revealed.

Participants

Remitted Depressives

Participants in the remitted depressives group were people who had previously been diagnosed by a health professional as having experienced a major depressive episode, but who had recovered within the last 2 years and were not depressed at the beginning of the study (Time 1). Other entry criteria included that participants had experienced unipolar, not bipolar, depression, and no other psychiatric diagnosis, other than depression. Exclusion criteria included traumatic brain injury (TBI) and mental retardation. Participants were recruited from the community through newspaper advertisements (Appendix H) and fliers placed in General Practitioner offices (Appendix I).

Initial Screening

A screening process was used to assess potential remitted depressive participants with regard to entry criteria. Initial screening was conducted by telephone. Telephone screening meant that it was possible to exclude people who obviously fell outside the entry criteria. Those people who appeared to be suitable for inclusion in the study following the telephone screening procedure were then mailed a pen-and-paper questionnaire, with a freepost reply envelope in which to return the questionnaire. The questionnaire consisted of the Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Brown, 1996) as well as questions about who made the diagnosis of depression, when it was made and demographic information (see Appendix J).

All people who returned the screening questionnaire were then telephoned by the principal researcher and their future involvement in the study was discussed.

In line with Beck's recommendations (Beck, 1996), a cut-off score of 17 was used to identify those potential participants who were likely to be depressed. This cut-off score was higher than that suggested for clinical purposes, in an effort to reduce the number of false positives. If a participant did not meet the inclusion criteria, they were offered a list of possible agencies from which they might seek help to be sent to them by mail. For characteristics of the resultant sample, see Chapter 9.

University Students

As with most previous studies in this area, these participants consisted of university students. They were recruited from third or fourth year psychology courses at Massey University, New Zealand (see Chapter 9 for a description of these participants).

Measures

The measures used in the research are given in Table 8.1. They assess personality, life events, depression and parental bonding. Some are self-report measures and others use an interview format. As described in more detail later, self-report and interview measures were used with the remitted depressive sample. Self-report measures were used with the university student sample.

Table 8.1. Constructs of interest and their corresponding indicators

Construct	Instruments
Personality	<i>Self-report</i> 1. Depressive Experiences Questionnaire, McGill revision (Santor et al., 1997b). 2. Sociotropy and Autonomy Scale, Revised (Clark et al., 1995).
Life events	<i>Self-report</i> 1. Negative Experiences Questionnaire (Clark et al., 1992). <i>Interview</i> 1. The UCLA Life Stress Interview (Hammen et al., 1985). i. Chronic Stress Interview ii. Episodic Life Events Inventory
Depression	<i>Self-report</i> 1. Beck Depression Inventory, Second Edition (Beck et al., 1996). <i>Interview</i> 1. Hamilton Rating Scale for Depression (Hamilton, 1960).
Parenting	<i>Self-report</i> 1. Parental Bonding Instrument (Parker, Tupling, & Brown, 1979). 2. Measure of Parenting Style – Abuse Scale (Parker, Roussos, Hadzi-Pavlovic, Mitchell, Wilhelm, & Austin, 1997).

Personality

1. Depressive Experiences Questionnaire, McGill Revision

The McGill revision of the Depressive Experiences Questionnaire (DEQ-McGill; Santor et al., 1997b; Appendix K) is a revision of the original 66-item version (DEQ; Blatt et al., 1976). It consists of 60 items designed to assess two dimensions of depressive experience, namely dependency and self-criticism.

The Dependency subscale and the Self-criticism subscale have 30 items each, with 12 items common to both scales, but scored in opposite directions. Participants are required to rate how much they agree or disagree with a series of statements that describe them across these dimensions. Ratings range from 1 (*strongly disagree*) through to 7 (*strongly agree*).

Dependency. This factor consists of items that are “primarily externally directed, refer to interpersonal relationships and contain themes of being concerned about

abandonment, feeling lonely and helpless, and wanting to be close to, related to, and dependent upon others” (Blatt et al., 1976, p. 384; see Chapter 2 for a fuller description of dependency). Examples of DEQ-McGill Dependency items include “Without support from others who are close to me, I would be helpless” and “I become frightened when I feel alone”.

Self-criticism. This factor consists of items that are more internally directed and “reflect concerns about feeling guilty, empty, hopeless, unsatisfied, and insecure and having failed to meet expectations and standards, ... and tending to assume blame and feel critical toward self” (Blatt et al., 1976, p. 385; see Chapter 2 for a fuller description of self-criticism). Examples of DEQ-McGill Self-criticism items are “I have a difficult time accepting weaknesses in myself” and “If I fail to live up to expectations, I feel unworthy”.

Examples of items common to both scales, but scored in opposite directions, are “I constantly try, and very often go out of my way to please or help people I am close to” (positive loading for Dependency subscale and negative loading for Self-criticism subscale) and “I am very satisfied with myself and my accomplishments” (positive loading for Self-criticism subscale and negative loading for Dependency subscale).

Reliability and Validity. The McGill revision of the DEQ retains many of the psychometric properties of the original measure, including reliability and validity. However, a strength of the McGill revision has been that, for both clinical and non-clinical samples, the Dependency and Self-criticism scales have been found to be uncorrelated in both men and women, preserving the degree of orthogonality found in the original scales (Blaney & Kutcher, 1991; for review, see Santor et al., 1997b).

Convergent validity for DEQ-McGill Dependency and Self-criticism has been supported. The DEQ-McGill Dependency and Self-criticism scales have been found to be correlated with theoretically related variables, including depressive mood and broad personality traits, such as neuroticism and agreeableness (see Santor et al., 1997b, p. 155 for further details). The reliability of the measures based on the current sample for this and other measures is provided in Chapter 9.

2. *Sociotropy and Autonomy Scale, Revised*

The Revised Sociotropy and Autonomy Scale (SAS-R; Clark et al., 1995; Appendix L) is a 59-item scale comprised of three subscales, Sociotropy (29 items), Solitude (13 items) and Independence (17 items). For each item, participants are asked to rate the *percentage that describes you*, from a choice of 25%, 50%, 75% and 100%. It is based in part on the original 60-item Sociotropy and Autonomy Scale (SAS; Beck et al., 1983), but was devised from an expanded 93-item version (Clark & Beck, 1991) developed in an effort to improve the validity of the Autonomy subscale of the original SAS. This 93-item version had 33 additional autonomy items in an effort to more adequately cover characteristics of the autonomous person. Validation studies using a series of principal component factor analyses were carried out on a university student sample (Clark & Beck, 1991; Clark et al., 1995). The results of these studies culminated in the current measure, with sociotropy items forming a single dimension (Sociotropy) and autonomy items consistently factoring into two orthogonal dimensions, named Solitude and Independence.

Sociotropy. The original Sociotropy subscale was designed to assess the importance of interpersonal relationships in a person's self-concept (Clark et al., 1995). The Sociotropy subscale in the SAS-R is very similar to the original SAS Sociotropy scale with 27 of the 29 items being unchanged. Examples of SAS-R Sociotropy items are "It is important to be liked and approved of by others" and "I feel bad if I do not have some social plans for the weekend".

Solitude. The Solitude subscale is designed to identify individuals who tend to be lonely and somewhat ambivalent about social contact with others. Individuals high on Solitude are likely to avoid social contact because they feel that other people hold unrealistic expectations of them and may feel cut off and distant from others (Clark et al., 1995). Examples of SAS-R Solitude items are "I am very uncomfortable when a close family member decides to 'pour their heart out' to me" and "sometimes I hurt family members and close friends without knowing that I've done anything wrong".

Independence. The SAS-R Independence subscale is designed to assess individualism, assertiveness and independence from others. It is not seen as a personality vulnerability factor per se but rather reflects a more adaptive personality style (Clark et al., 1999).

Examples of Independence items are “I focus almost exclusively on the positive outcomes of my decisions” and “I prefer to work out my personal problems by myself”.

Reliability of the SAS-R. Although actual alpha coefficients were not published, Clark et al. (1995) reported that the internal consistency for both Solitude and Independence was better than had been previously reported for the Autonomy subscale, calculated by Robins (1985) for the original 60-item SAS. Reliability for Sociotropy has also been reported to be adequate (Clark et al., 1995; see Chapter 9 for current reliability coefficients).

Validity of the SAS-R.

Sociotropy. Like the original SAS Sociotropy subfactor, SAS-R Sociotropy demonstrated strong convergent and discriminant validity in the study of Clark et al. (1995). Strong correlations were found with DEQ Dependency and PSI Sociotropy as well as with the Affiliation Motivation subscale of the Interpersonal Orientation Scale (Hill, 1987, cited in Clark et al.). Weak relationships were demonstrated with DEQ Self-criticism and PSI Autonomy.

Solitude. Solitude has been found to have better convergent and divergent validity than the original SAS Autonomy subscale (Clark et al., 1995). Convergence was demonstrated by strong correlations with DEQ-McGill Self-criticism as well as with PSI Autonomy. Divergence has been seen by weaker correlations with DEQ-McGill Dependency and PSI Sociotropy (Clark & Beck, 1991) and SAS-R Sociotropy (Blaney & Kutcher, 1991). This divergence is important, as the original SAS Autonomy scale was criticised for measuring the absence of Sociotropy, rather than a construct in its own right (Blaney & Kutcher, 1991). Clark et al. (1999) described the initial studies as promising, supporting the contention that Solitude might constitute the vulnerability feature of autonomy, as opposed to Independence, which appears to have a more adaptive orientation.

Independence. In line with its more adaptive orientation, Clark et al. (1995) found that SAS-R Independence did not correlate with depression or other personality vulnerability factors. SAS-R Independence was correlated with DEQ-McGill Efficacy.³²

Life Events

1. UCLA Life Stress Interview

The UCLA Life Stress Interview (Hammen et al., 1985) is made up of two parts: the Chronic Stress Interview and the Episodic Life Events Inventory.

Chronic Stress Interview. The Chronic Stress Interview (CSI; Appendix M) component of the UCLA Life Stress Interview is used to assess the level of ongoing stress experienced by each participant in seven domains. These domains are intimate relationships, friendships, family relationships, children, work, finances and health. The interviewer systematically asks questions about each of these seven areas and makes a rating on a Stress scale, which ranges from 1 to 5 (where 1 = “optimal circumstances” and 5 = “the most stressful circumstances”). There are specific behavioural descriptions for each point on the scale. For example, for the intimate relationships domain, 1 = “Exceptional intimate relationships – exceptional on all above quality factors, good conflict resolution ability” and 5 = “Abusive (physically and or emotionally) negative conditions, inability to trust, lack of communication, not reciprocal”.

Episodic Life Events Inventory. The Episodic Life Events Inventory (ELEI; Appendix N) was developed on the basis of the methods of Brown’s contextual threat assessment (Brown & Harris, 1978). Participants are asked to identify stressful life events that have occurred during the last 6 months, and are then queried about the context surrounding each event. A detailed written profile is compiled, including details of the event’s timing and circumstances, the individual’s resources and other relevant information. To reduce the confounding effects of depression (and in line with the recommendation of Brown and Harris (1989), events that are purely psychiatric in nature (e.g., hospitalisation, suicide attempt) are excluded.

³² DEQ Efficacy is not seen as a vulnerability factor for depression, and as such is not used in research investigating of the congruency hypothesis. It was not used in the current research.

During the interview, the participants themselves rate each event on three dimensions: (i) the impact that the event has had on their relationships with other people (impact on relationships); (ii) the impact that the event has had on their sense of achievement (impact on achievement); (iii) the negative impact/stress of the event (stress).

Team meetings are then held and each event is rated by the team for the “Negative Impact or Stress” likely to have occurred from that event (team rating of stress). The research team is made up of a minimum of three individuals who administer the ELEI to different participants. The written reports of these interviews, which include the surrounding context of the events covered, are then presented by the interviewer to the rest of the research team. The research team is unaware of the participant’s subjective reaction to the event, and have not been informed of the participant’s diagnostic status. The team members are permitted to ask the interviewer questions regarding the context of the event. Team members arrive at a consensus rating of each event’s Objective Impact on a scale from 1 to 5, with 1 = “not at all stressful” and 5 = “extremely stressful” (see Appendix N).

Reliability and Validity. Good inter-rater reliability data has been found for both parts of the UCLA Life Stress Interview (Daley et al., 1987; Hammen et al., 1985a, 1985b; Hammen et al., 1995). For example, Hammen et al. (1985) assessed the inter-rater reliability of the Episodic Life Events Inventory by having two separate teams independently rate all events for each follow-up interview. The overall kappa coefficients between teams’ ratings were .79 for short-term threat, .84 for long-term threat, and .75 for independence ratings. All were highly significant. Similarly reliability analyses have been performed on the Chronic Stress Interview by having a second set of interviewers make independent ratings (e.g., Daley, 1997; Hammen, Adrian, Gordon, Burge, Jaenicke, & Hiroto, 1987). In the Hammen et al. (1987) study, the overall reliability coefficient for the average rating across areas of functioning was .97 ($p < .001$). With respect to the validity of the Chronic Stress Interview, scores were found to covary with conditions that might be expected to produce ongoing difficulties. For example, average Chronic Stress Interview scores were found to correlate with socioeconomic status and education (Hammen et al., 1987). In this study, the separate scales of chronic stress were also found to correlate with independent indicators. For example marital happiness ratings correlated .50 with marital/social strain for married

women from the Dysfunctional Adjustment Scale (Spanier's 1976, cited in Hammen et al., 1987) ($p < .001$).

2. Negative Experiences Questionnaire

The Negative Experiences Questionnaire (NEQ; Clark et al., 1992; Appendix O) is a 110-item self-report questionnaire developed specifically to assess life events in studies of diathesis-stress and, more specifically, the congruency hypothesis. A distinguishing property of the NEQ as a self-report measure is that it assesses participants' subjective appraisals of life events. Also, because the diathesis-stress model for depression refers only to negative life events, the NEQ assesses just negative events. Events that were thought to have a clear sociotropic or autonomous orientation by an expert panel, as discussed earlier, were chosen. Like the ELEI, and in line with Brown's theory (Brown & Harris, 1978), the NEQ is designed not to include items that overlap with depressive symptomatology, such as major change in sleeping or eating habits. The initial pool of items produced during the development of the NEQ was generated from DSM-III-R, Axis IV information and from possible precipitating events noted from the intake reports for a sample of clinically depressed outpatients (Clark et al., 1992). Some additional items, present on other standard life event inventories, were also added.

The NEQ categorises events under 10 headings, namely work, school, physical health, love and marriage, children, other family members, social activities, finances, crime and legal matters, and residence. Events can be classified as sociotropic ($n = 44$), autonomous ($n = 46$) or neither ($n = 20$) using a taxonomy developed by Clark (personal communication, 2001; see Appendix P).³³

Participants are required to read through the total 110 items and to indicate if any of the events has occurred during the last 6 months. As well as indicating an event's occurrence, participants are asked to rate the *degree of general upset* caused by the event, the *perceived loss of interpersonal relationships* and the *perceived loss of goals*. For degree of *general upset*, participants are asked *How upsetting was this event?*. For *loss of relationships*, participants are asked *How much did this event result in a loss of*

³³ The taxonomy was developed by three independent judges (experienced researchers in the area) who rated the life events as sociotropic or autonomous. Ninety events were categorised unanimously. The remaining 14 items were considered to be ambiguous and were excluded from the subsequent analysis (Clark, personal communication, 2001).

closeness, acceptance or support from others? For *loss of goals*, participants are asked *How much did this event result in a loss of your independence, freedom or goals?*

Participants rate their responses to these questions on a five-point scale ranging from 1 (*Not at all*) to 5 (*Extremely*); see Appendix O.

Variables for General upset, Interpersonal upset and Achievement upset were then calculated. Mean scores for these variables were calculated for *sociotropic* events and *autonomous* events separately using the taxonomy suggested by Clark (personal communication, 2001). The calculation of mean upset scores controls for differences across subjects in the number of life events endorsed (Clark et al., 1992). Variables for Time 2, Time 3 and Times 2 and 3 combined (Time 2–3) were calculated.³⁴ Combining the Time 2 and Time 3 data captured information about the events that occurred in the 12-month period between Time 1 and Time 3, rather than just the 6 months preceding Time 3.

Depression

1. Hamilton Rating Scale for Depression

The Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960; Appendix Q) is a 17-item structured interview. It was designed to assess “the severity of a patient’s condition quantitatively and for showing changes in that condition” (Hamilton, 1967, p. 290). It was described by Riskind, Beck, Brown, and Steer (1987) as one of the most commonly used clinical rating scales for measuring the intensity of depression.

Questions are directed to how the person has been feeling in the last week. Items include depressed mood, guilt, suicide, insomnia (early, middle and late), work and interests, retardation, agitation, anxiety (psychic and somatic), somatic symptoms (gastrointestinal and general), general symptoms (including loss of libido), hypochondriasis, insight and loss of weight. Items are rated on either a three-point scale or a five-point scale. Total scores can range from 0 to 52. Scores of 8–17 indicate mild depression; 18–25, moderate depression; over 25, severe depression (National Health Committee, 1996).

³⁴ Variables for Time 1 were not calculated, as life events at Time 1 occurred in the 6 months prior to the beginning of the study and were not of interest to the current research.

Reliability and Validity. Inter-rater reliability has shown to be $r = 0.90$ for a sample of 70 patients (Hamilton, 1960). The HRSD has been factor analysed and six factors have been extracted. The first factor may be regarded as a general factor of depression and factor scores are found to correlate “extremely highly” with total scores (Hamilton, 1964). The second factor is regarded by Hamilton (1964) to be a retarded-agitated factor. The other factors are not as clearly definable and Hamilton suggests that the fifth and sixth factors are not stable enough to consider.

In terms of convergent validity, support has been demonstrated (see the next section on the BDI-II).

2. *Beck Depression Inventory, Second Edition*

The Beck Depression Inventory, Second Edition (BDI-II; Beck et al., 1996; Appendix R) is a revision of the original Beck Depression Inventory (BDI; Beck et al., 1979b) and the amended Beck Depression Inventory (BDI-IA; Beck & Steer, 1993). It was specifically designed to measure the severity of self-reported depression according to the criteria listed in the *Diagnostic and Statistical Manual of Mental Disorders* (4th edn [DSM-IV]; American Psychiatric Association, 1994).

Like the original BDI and the BDI-IA, there are still 21 items, and it is scored by summing the highest rating for each of the 21 symptoms. A four-point scale ranging from 0 to 3 is still employed for each item, but the time frame for the ratings has been changed from 1 week to 2 weeks.

Reliability and Validity. Test-retest stability was assessed in a group of outpatients based on responses to the BDI-II at the first and second therapy sessions, approximately 1 week apart (Beck et al., 1996). The test-retest correlation of 0.93 was significant. Cronbach alpha coefficients of 0.92 (outpatient) and 0.93 (college students) were also reported.

The BDI-II has displayed convergent and divergent validity with respect to clinically rated depression and anxiety, respectively (Steer, Ball, Ranieri, & Beck, 1997). For example, it is more positively correlated with scores on the revised Hamilton Psychiatric Rating Scale for Depression than with scores on the revised Hamilton

Rating Scale for Anxiety (Riskind et al., 1987). When looking at the relationships of the BDI-II with respect to the SCL-90-R (Derogatis, 1983; an instrument often employed for assessing self-reported depression and anxiety), scores on the BDI-II were more positively correlated with those of the Depression subscale than those of the Anxiety subscale. Although the BDI-II was significantly correlated with the Beck Anxiety Inventory (BAI; Beck & Steer, 1990), this was in line with expectations, given the frequent co-morbidity of depression and anxiety (Beck & Steer, 1990). Further convergent validity was established by significant correlations between the BDI-II and the Beck Hopelessness Scale (BHS; Beck & Steer, 1988), the Scale for Suicidal Ideation (SSI; Beck, Kovacs, & Weissman, 1979) and the initially amended Beck Depression Inventory (BDI-IA; Beck & Steer, 1993).

Parenting

1. Parental Bonding Instrument, Kendler's Revision

Kendler's version of the Parental Bonding Instrument (PBI; Kendler, 1996; Appendix S) is a three-factor revision of the original PBI (Parker et al., 1979) and measures participants' perceptions of their parents' behaviour towards them during the first 16 years of their lives. The original version of the PBI (Parker et al., 1979) had two subscales named Care (consisting of 12 items) and Overprotection (13 items). In the development of the original PBI, Parker et al. (1979) found three factors, but adopted a two-factor structure because the variance accounted for by the third factor was relatively small. Also, they thought that there were advantages in a two-factor structure as parents could effectively be assigned to one of four quadrants to allow more simple comparison of parental styles (Sato, Narita, Hirano, Kusunoki, Sakado, & Uehara, 1999).

However, a recent body of research has consistently found PBI Overprotection to be made up of two subfactors, one to do with overprotection and the other to do with an authoritarian parenting style (Chambers, Power, Loucks, & Swanson 2000; Cubis, Lewin, & Dawes, 1989; Gomez-Beneyto, Pedros, Tomas, Aguilar, & Leal, 1993; Kendler, 1996; Murphy, Brewin, & Silka, 1997). Of several three-factor models available, Kendler's model was selected for the present study over other models based on the strength of a recent confirmatory factor analysis (Sato et al., 1999).

Kendler's three-factor model consists of 16 items rather than the original 25 items. Subscales are Warmth (7 items) and the original Overprotection scale, which now comprises two distinct factors: Protectiveness (5 items) and Authoritarianism (4 items). Warmth is similar to the original Care subscale of Parker et al. (1979), and, as the name suggests, reflects "warmth and lovingness" (Kendler, 1996, p. 13). Protectiveness reflects "a protective and controlling parenting style" (Kendler, 1996, p. 14) and Authoritarianism reflects a parenting style that "discourages autonomy and independence" (Kendler, 1996, p. 14).

Participants are asked to read each of the 16 statements and to indicate on a four-point scale ranging from 1 ("very like") through to 4 ("very unlike") the point that "best describes" their mother or father during the first 16 years of their life (separate questionnaires are completed for the participant's mother and father). Examples of parental behaviours on the Warmth subscale include "Spoke to me with a warm and friendly voice" and "Seemed emotionally cold to me" (negative loading). Examples of items from the Protectiveness subscale are "Did not want me to grow up" and "Tried to control everything that I did". Examples of Authoritarianism items include "Liked me to make my own decisions" (negative loading) and "Let me decide things for myself" (negative loading).³⁵

Reliability and Validity. A number of studies have supported the reliability of the original PBI to measure both perceived and actual parenting (Parker, 1981; Parker et al., 1979; Parker & Gladstone, 1996; Plantes, Prusoff, Brennan, & Parker, 1988; Wilhelm & Parker, 1990). In terms of reliability, short-term test-retest reliability over a 3-week interval produced Pearson correlation coefficients of 0.76 (Care) and 0.63 (Overprotection) in a non-clinical sample (Parker et al., 1979). The PBI has been found to be stable over time and to be unaffected by the age, social class or sex of the respondent (Parker, 1990). Higher retest coefficients (ranging from 0.87 to 0.92) were found in participants when depressed and then significantly improved over a 9-week interval (Parker, 1983). Similarly, depressed outpatients showed retest coefficients ranging from 0.90 to 0.96 when initially depressed and 4–6 weeks later when significantly improved (Plantes et al., 1988).

³⁵All four items on the Authoritarianism scale have negative loadings.

There is evidence to suggest that perceived parenting, as measured by the original PBI, is related to actual parenting (Brewin et al., 1992; Parker, 1981, 1983, 1984; Parker & Gladstone, 1996). For example, in Parker (1984), good convergent and discriminant validity was found when actual parental behaviours, responses to the PBI and an individual's spontaneous descriptions of their parents were compared. Similarly, Duggan, Sham, Minne, Lee, and Murray (1998) found no significant differences between self and sibling ratings on the PBI for both never-depressed and remitted depressives groups. Scores on the PBI have consistently been found to be independent of current depressive symptoms (Duggan et al., 1998; Gotlib, Mount, & Cordy, 1988; Parker, 1981, 1983; Sakado, Sato, Uehara, Sakado, & Someya, 1999).

2. Measure of Parenting Style – Abuse Scale (MOPS)

The MOPS – Abuse Scale (Parker et al., 1997; Appendix S) was developed in response to observations by Brown, Harris, and Eales (1996) that the PBI does not assess parental forms of abuse. The MOPS – Abuse Scale does not focus on specific abusive behaviours, but it attempts to capture the constructs that subsume abusive behaviours and measures “broad domains of parental abuse” (Parker et al., 1997, p. 1200).

The MOPS– Abuse Scale consists of five items and is designed specifically so that it can be added to the end of the PBI. For this reason, the instructions and scoring details for the PBI and the MOPS are very similar, with scores ranging from 1 (*not true at all*) through to 4 (*extremely true*). Examples of MOPS items are “Verbally abusive to me” and “Physically violent or abusive to me”.

*Reliability and Validity.*³⁶ In comparison with the PBI, raw scale scores on the MOPS reported by Parker et al. (1997) for a clinical sample were skewed, with a significant percentage of subjects returning zero scores because items are weighted to dysfunctional experiences. Parker et al. note that zero scores would be expected to be greater in non-clinical samples. In the current study, the MOPS – Abuse Scale was

³⁶ Despite the MOPS being used in recent research (e.g., Parker, Roy, Wilhelm, Mitchell, Austin, & Hadzi-Pavlovic, 1999; Whiffen, Parker, Wilhelm, Mitchell, & Malhi, 2003), in terms of published reliability coefficients, no information is currently available based on a comprehensive search of PsychInfo and Medline data bases. Reliability coefficients for the current study are reported in Chapter 9.

shown to be independent of the PBI Care and Protectiveness subscales (see Results) and therefore was considered to provide useful, additional information.

Concurrent validity has been assessed by comparing MOPS scores with information gathered through a semi-structured interview (Parker et al., 1997). Significant links between the degree to which subjects reported exposure to abuse and threatening parenting experiences and MOPS abuse scores were found. Also, participants who described parental abuse at interview returned significantly higher MOPS abuse scores.

Procedures

Remitted Depressives

Screening questionnaires (BDI-II, clinical and demographic data) were posted back from participants by mail. Assessment interviews with those participants who met the entry criteria (BDI-II score of less than 17, see “Initial Screening”, earlier in this chapter) were scheduled. Interviews were conducted at Massey University, Palmerston North, as well as in interview rooms in Central Wellington, and, in two cases, in participants’ homes (because of physical disability and difficulty with transport respectively). These initial assessments consisted of an interview covering depressive status (HRSD), chronic stressors (CSI) and life events (ELEI), as well as completion of self-report questionnaires covering personality (DEQ-McGill, SAS-R), life events (NEQ), depressive symptoms (BDI-II) and parental attachment (PBI and MOPS, see Table 8.2).

Initial assessments took approximately 2 hours to complete. Follow-up assessments were completed at 6 months (Time 2) and 12 months (Time 3) following the initial assessment. Follow-up assessments took less time than the initial assessment as the 30-minute long Chronic Stress Interview (covering ongoing, stable, life circumstances) did not need to be readministered. Any changes in these variables were covered by looking at life events that had occurred over the 6-month period since the last interview. These were assessed using the ELEI (interview) and the NEQ (self-report). A token cash reimbursement of \$15 was given to participants following each interview to compensate partially for their time (see Appendix T for Payment and Contact form).

Participants were sent a letter thanking them for taking part in the study following each assessment. Thank-you letters following Time 1, Time 2 and Time 3 data collections for the remitted depressives group are given in Appendix U.

Table 8.2. Overview of procedure for the remitted depressives group

Advertisements	Screening Process	Time 1	Time 2 (6 months later)	Time 3 (12 months later)
Daily newspaper: <i>The Evening Standard</i>	<u>Telephone screening</u>	<u>Assessment procedure</u>	<u>Assessment procedure</u>	<u>Assessment procedure</u>
Community newspapers: <i>The Guardian</i> <i>The Tribune</i>	Established: 1. Recent depression diagnosed by a health professional.	<i>Interview:</i> Depression (HRSD). Ongoing life circumstances (CSI).	<i>Interview:</i> Depression (HRSD). Life events (ELEI).	<i>Interview:</i> As for Time 2.
Fliers distributed to: General Practitioner offices	2. Recovered within the last 2 years. 3. Not currently depressed.	Life events (ELEI).	<i>Self-report measures:</i> Life events (NEQ). Current mood (BDI-II).	<i>Self-report measures:</i> As for Time 2.
	<u>Mailed questionnaire</u>	<i>Self-report measures:</i> Life events (NEQ). Current mood (BDI-II).	Personality (DEQ-McGill; SAS-R).	
	Assessed: Current mood (BDI-II). Demographic information.	Personality (DEQ; SAS-R). Parental bonding (PBI, MOPS).	Parental bonding (PBI, MOPS).	

Note.

BDI-II = Beck Depression Inventory, Second Edition; HRSD = Hamilton Rating Scale for Depression; NEQ = Negative Experiences Questionnaire; ELEI = Episodic Life Events Inventory; SAS-R = Sociotropy and Autonomy Scale, Revised; DEQ = Depressive Experiences Questionnaire, McGill Revision; PBI = Parental Bonding Instrument; MOPS = Measure of Parenting Style – Abuse Scale.

Ordering of Measures

Remitted Depressives

The assessment interviews started with the Hamilton Rating Scale for Depression to confirm that people were not depressed at the commencement of the study. This was followed by the UCLA Life Stress Interview, made up of the Chronic Stress Interview and the Episodic Life Events Inventory. Self-report measures were then administered following a small break. Of the self-report measures, the Negative Experiences

Questionnaire was administered first as it logically followed on from the Episodic Life Events Inventory (both assess life events that have occurred in the last 6 months). The remaining four measures (BDI-II, SAS-R, DEQ-McGill and PBI-MOPS³⁷) were counterbalanced using the Latin Square Method (Kazdin, 1998), resulting in four possible different combinations. Participants were assigned to one of the four groups sequentially at the time their interviews were arranged (i.e., first participant to be scheduled an assessment was assigned to Group I, second participant was assigned to Group II, etc.).

University Students

Participants from the university students group completed the self-report questionnaires in a group setting at Massey University in the presence of the principal researcher. The university student group did not complete any interview based measures.

As with the remitted depressives group, the Negative Experiences Questionnaire was administered first and the remaining four measures (BDI-II, SAS-R, DEQ-McGill and PBI-MOPS) were counterbalanced using the Latin Square Method (Kazdin, 1998), resulting in four possible different combinations. Participants were assigned to one of the four groups sequentially as the questionnaires were handed out. An overview of the procedure for university students is given in Table 8.3.

³⁷ MOPS was attached to the end of the PBI, as recommended by Parker et al. (1997).

Table 8.3. Overview of procedure for the university students group

Recruitment	Time 1	Time 2 (6 months later)	Time 3 (12 months later)
Psychology students	<u>Assessment procedure</u>	<u>Assessment procedure</u>	<u>Assessment procedure</u>
300 and 400 level psychology courses at Massey University	Self-report measures: Demographic sheet History of depression Life Events (NEQ) Depression (BDI-II) Personality (DEQ-McGill; SAS-R) Parental Bonding (PBI, MOPS)	Self-report measures: Life Events (NEQ) Depression (BDI-II) Personality (DEQ-McGill; SAS-R) Parental Bonding (PBI, MOPS)	Self-report measures: As for Time 2

Note.

BDI-II = Beck Depression Inventory, Second Edition; NEQ = Negative Experiences Questionnaire; SAS-R = Sociotropy and Autonomy Scale, Revised; DEQ = Depressive Experiences Questionnaire, McGill Revision; PBI = Parental Bonding Instrument; MOPS = Measure of Parenting Style – Abuse Scale.

Data Analysis**Data Handling Procedure**

The raw data were coded by Computing Services, Massey University, and were supplied to the researcher in SPSSPC format. All data analyses were conducted by the researcher using SPSSPC (version 10.1).

Statistical Analysis Procedures

From the measures included in the current study, especially the life event measures (NEQ and ELEI), a wide range of variables could have been calculated. For example, from the score for Interpersonal upset, it is possible to calculate total Interpersonal upset, maximum Interpersonal upset and mean Interpersonal upset. These three variables can in turn be calculated for all events, or just for sociotropic events and for

autonomous events. This makes nine potential variables possible for this one life events score. This variable can then be calculated for Time 1, Time 2, Time 3 and Times 2 and 3 combined. However, it is considered to be important to limit the number of variables, as, in general, for each additional variable on which an analysis is repeated, the risk of a Type I (false positive) error increases. To minimise the risk of Type I error, theoretically driven variables were calculated and only planned analyses were conducted. An example would be the fact that research suggests that life events are not additive in their effects. That is, a single major event is likely to have more impact than, and override, the effects of a series of smaller events (Brown & Harris, 1978; Coyne & Whiffen, 1995; Monroe & Simons, 1991). For this reason, the potential variables total Interpersonal upset and total Achievement upset were not calculated. Instead, mean and maximum values for these variables were calculated.

Owing to the exploratory nature of this research, it was necessary to consider Type II error as well as Type I error. The number of regression analyses conducted, although relatively large (see Chapter 11), was again limited to theoretically driven analyses. Given that effect sizes have been small in this area of research, taking an effect size of 0.35 (relatively small; Cohen, 1988), an alpha level of 0.05 and a power level of 0.80, according to Friedman (1982, Table 1, p. 522) a sample size of 59 is needed. The current study had 61 participants in each group, although it is noted that only 41 participants per group were left at the 12-month follow-up.

In line with the suggestion of Coyne and Whiffen (1995) (see Chapter 6), the personality variables from the SAS-R and the DEQ-McGill³⁸ were kept as continuous variables. The scoring programme for the DEQ is given in Appendix W.

³⁸ Sociotropy, Solitude, Independence, Dependency and Self-criticism.

CHAPTER 9: PARTICIPANT CHARACTERISTICS, PSYCHOMETRICS AND DESCRIPTIVE STATISTICS: RESULTS AND DISCUSSION

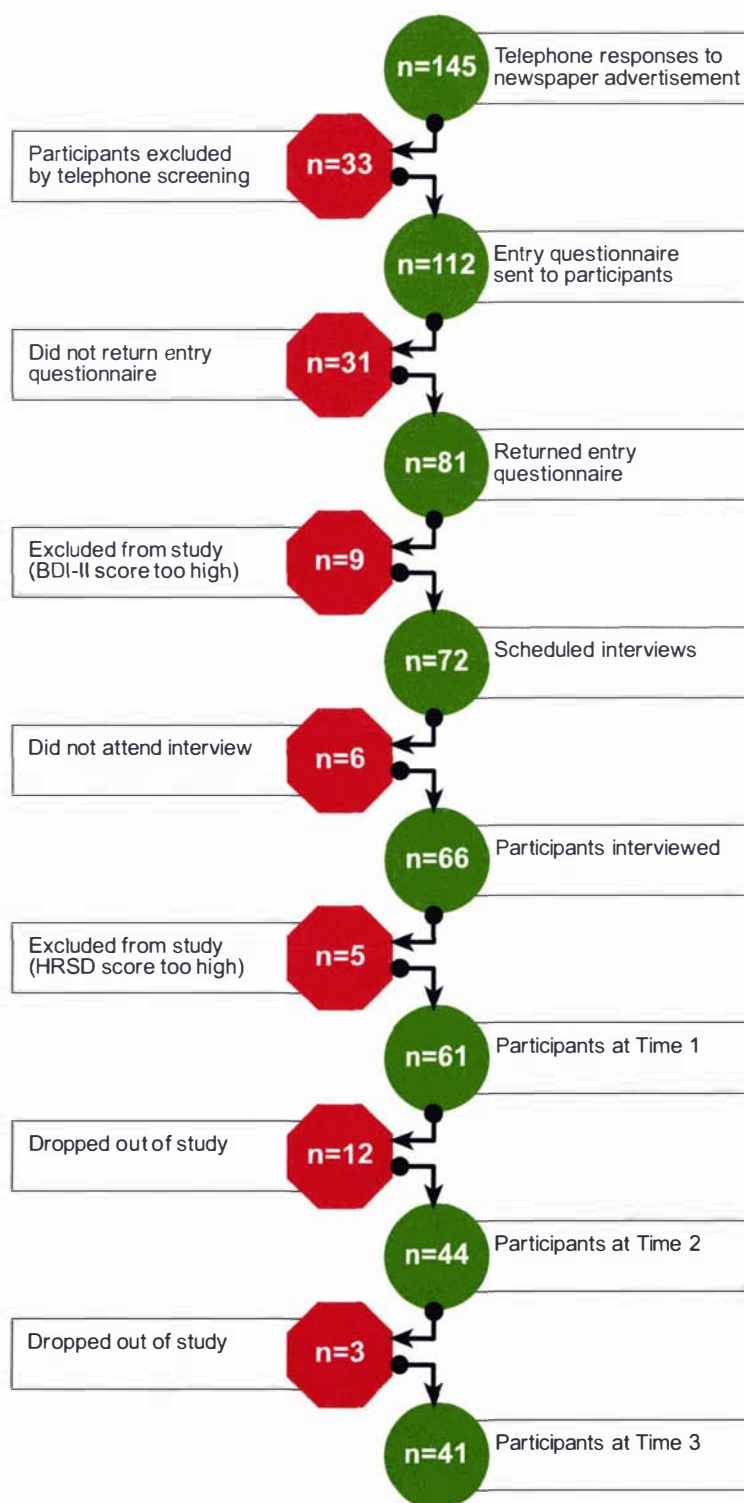
Introduction

As a foundation for the three research questions (Chapters 10–12), this chapter first presents the participant characteristics for both the university students group and the remitted depressives group. The psychometric data for the measures used in the current study are then presented and followed by descriptive statistics (means and standard deviations) for the main variables.

Participants

Remitted Depressives

The process of recruitment and the subsequent numbers of participants at each stage of the research are shown in Figure 9.1. Advertising for participants through daily and local newspapers, and fliers in GP offices resulted in 145 telephone responses. Of the 145 respondents, 33 did not meet the criteria for inclusion in the study on the basis of telephone screening. Reasons for this included their depression not being formally diagnosed ($n = 9$), the person recovering from the depression more than 2 years ago ($n = 11$), the depression being bipolar rather than unipolar ($n = 8$), having a co-morbid diagnosis of Post Traumatic Stress Disorder ($n = 3$) and having had a Traumatic Brain Injury ($n = 2$). Following the telephone screening, all potential participants ($n = 112$) were sent an entry questionnaire by mail. As 31 of these potential participants did not return the entry questionnaire, they were taken to have dropped out of the study. A further nine were excluded from the study once their entry questionnaire was returned by mail, because their BDI-II scores were greater than 17 (hence they did not fulfil the “not currently depressed” entry criterion). This left 72 participants who met the inclusion criteria for the study.



Note: BDI-II = Beck Depression Inventory, Second Edition; HRSD = Hamilton Rating Scale for Depression.

Figure 9.1. Recruitment of remitted depressive participants and numbers at Time 1, Time 2 and Time 3.

From the 72 initial interviews that were scheduled, six people did not attend their appointments, resulting in 66 interviews. Five of the participants who were interviewed were not included in the study, because their HRSD or BDI-II scores were higher than the non-depressed cut-off,³⁹ leaving 61 participants in the remitted depressives group at Time 1. Forty-four of these participants remained in the study at Time 2 and 41 participants remained at Time 3 (see also Figure 9.1).

University Students

Sixty-one participants⁴⁰ were recruited from undergraduate and graduate psychology classes. The number of participants at Time 1, Time 2 and Time 3 is given in Table 9.1. Dropout rates over the 12-month period were very similar for the remitted depressive and university student participants. In fact, like the remitted depressives group, 41 of the university student participants remained in the study at Time 3.

Table 9.1. University students and remitted depressives. Number of participants at Times 1, 2 and 3

	Number of Participants (<i>n</i>)	
	University Students	Remitted Depressives
Participants included in the study at Time 1	61	61
Participants at Time 2 (6-month follow-up)	48	44
Participants at Time 3 (12-month follow-up)	41	41

Demographic Characteristics of the Participants

There were significantly more women than men in both the university students group and the remitted depressives group, as shown in Table 9.2. The female to male ratio was just over 2 to 1 in the remitted depressives group, and 4 to 1 in the university students group. The remitted depressives group had a greater percentage of women than would be expected from epidemiological data for depression, which is approximately 2 to 1 (Barlow & Durand, 2005).

³⁹ These participants were offered information on how to access mental health services.

⁴⁰ Sixty-one participants were recruited to match the number of participants in the remitted depressives group at Time 1.

Although the youngest participants for the university students and remitted depressives groups were of a similar age (20 and 22 years respectively), the range was broader for the remitted depressives, with the eldest participant being 82 years old (the eldest participant in the university students group was 65 years old). The mean age for the remitted depressives group (40.77 years, $SD = 11.16$) was higher than that for the university students group (31.55 years, $SD = 11.73$).

Both samples were predominantly Pakeha (i.e., European). Because at least some potential Maori and Pacific Island participants were exposed to information about the study through advertising in community newspapers (which are delivered to every household) and fliers put in GP offices, explanation for their absence needs to be considered.⁴¹ It may be that potential Maori participants needed to be exposed to information about the study from more relevant sources such as the local Maori radio station. Also, written advertising could have included Te Reo and been left with identified Maori health providers, rather than just more generally in GP offices.

Inclusion criteria meant that a participant's depression needed to be formally diagnosed. As Maori and Pacific Island people do not seek medical help as often as their overall patterns of mortality and health suggest (Davis, Lay-Yee, Sinclair, & Gribben, 1997), it follows that their depression might be less likely to be formally diagnosed compared with non-Maori and non-Pacific-Island groups. Attitudes such as believing one should be strong enough to cope (Wells, Robins, Bushnell, Jarosz, & Oakley-Brown, 1994) and a form of embarrassment (e.g., whakama) around mental health problems are additional reasons why depression might be less often formally diagnosed and perhaps reasons for not volunteering.

As would be expected, the university students had a higher percentage (100%) of tertiary education than the remitted depressives (57.4%). However, even the latter is well above the average educational attainment levels for the general population.⁴² The reason for this is not clear. However, it may be that people with tertiary education are more likely to volunteer for research projects than people without tertiary education.

⁴¹ Consultation with those with expertise in Maori mental health was sought at this point.

⁴² In the latest Census, 1 in 3 adults had a post-school qualification, and 1 in 8 had a Degree (Statistics New Zealand, 2001).

Table 9.2. Demographic characteristics of the participants

Variables	University Students (n = 61)	Remitted Depressives (n = 61)
Gender (% females, % males)	80.30, 19.70	68.90, 31.10
Age		
Mean (sd)	31.55 (11.73)	40.77 (11.2)
Range (years)	20–65	22–82
Ethnicity		
Asian	0.00	3.30
Maori	1.60	0.00
Pacific Island	3.30	1.60
Pakeha	95.1	86.90
Other	0.00	8.20
Education (highest level of involvement (%))		
High school	0.00	24.50
Tertiary	100.00	57.40
Annual Income (%)		
Less than \$10,000	47.20	19.60
\$10,000–\$50,000	32.10	54.10
More than \$50,000	7.50	13.10
Marital Status (%)		
Married/defacto	45.90	65.60
Unmarried	47.50	34.40
Note. Missing data account for some percentages not adding up to 100%.		

Although the remitted depressives tended to have a higher annual income than the university students, this information may be of limited value. The question on income asked about an *individual's* yearly income rather than the *family* income. From information gathered during the interviews, it became apparent that there were participants from the remitted depressives group who, while they themselves had a low, or no, annual income, they had a partner with a reasonably high income. Similarly, it might be expected that some of the students who were not earning were living with a partner who was earning.

Close to equal numbers of the university students were married/defacto and unmarried. More of the remitted depressives group were married/defacto than not married (65.6%:34.4% respectively) compared with the university students group. The fact that

fewer students than remitted depressives were married is not unexpected, given the younger mean age and age range. According to the latest Census data, 57% of the population in New Zealand were “partnered” in 2001 (Statistics New Zealand, 2001).⁴³

Clinical Characteristics of the Participants

The results of the Beck Depression Inventory, Second Edition (BDI-II) for both the university students and the remitted depressives are shown in Figure 9.2. For the university students, the mean BDI-II total score at Time 1 of 7.17 ($SD = 6.35$) increased slightly at Time 2 to 7.83 ($SD = 7.17$) and then reduced to 7.15 ($SD = 6.17$) at Time 3.

Entry criteria for the study required that the remitted depressive participants had a BDI-II score of less than 17 (see Chapter 8). Mean BDI-II total scores for the remitted depressive participants increased from 4.78 ($SD = 4.04$) at Time 1 to 8.15 ($SD = 9.03$) at Time 2 and then reduced to 5.04 ($SD = 5.16$) at Time 3.

One-way repeated measures analysis of variance (ANOVA) demonstrated that there was no significant difference in within-group mean BDI-II scores for either the university students or the remitted depressives at the three time intervals (p values > 0.10).

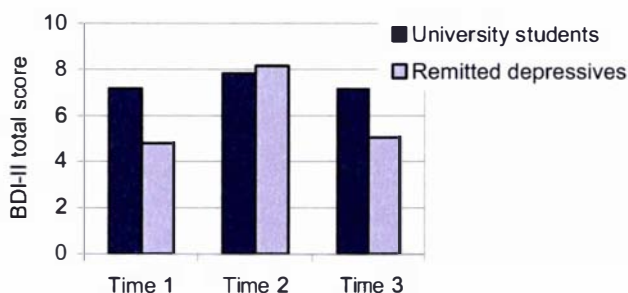


Figure 9.2. BDI-II total scores at Times 1, 2 and 3 for both the remitted depressives and the university students.

⁴³ “Partnered” includes “legal spouse”, “other partnership” and “partner, not further defined”.

Additional Clinical Characteristics of the Remitted Depressives Group

Additional information was collected for the remitted depressives group. This included data from the Hamilton Rating Scale for Depression (HRSD), the number of previous depressive episodes, the number of previous suicide attempts, the number of previous psychiatric hospitalisations and who had made the most recent diagnosis of depression. This information is given in Figures 9.3–9.6.

Figure 9.3 shows mean scores on the HRSD for the remitted depressives group at Time 1 ($M = 4.96$, $SD = 4.19$), Time 2 ($M = 6.14$, $SD = 6.21$) and Time 3 ($M = 5.00$, $SD = 4.50$). All mean scores were well within the non-depressed range (scores of under 18 are considered to be not depressed; National Health Committee, 1996).

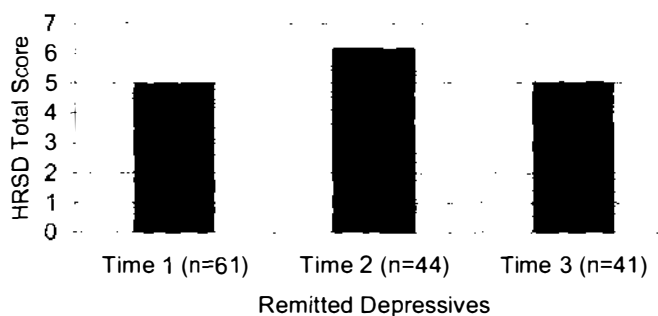


Figure 9.3. Remitted depressives. Mean scores on the HRSD at Times 1, 2 and 3.

Participants whose depression was diagnosed by a psychiatrist or a psychologist made up just over half the sample ($n = 31$, 51%; see Figure 9.4). Forty-one percent ($n = 25$) of the remitted depressives group had had their depression diagnosed by their GP and 8% ($n = 5$) had had their depression diagnosed by a counsellor.

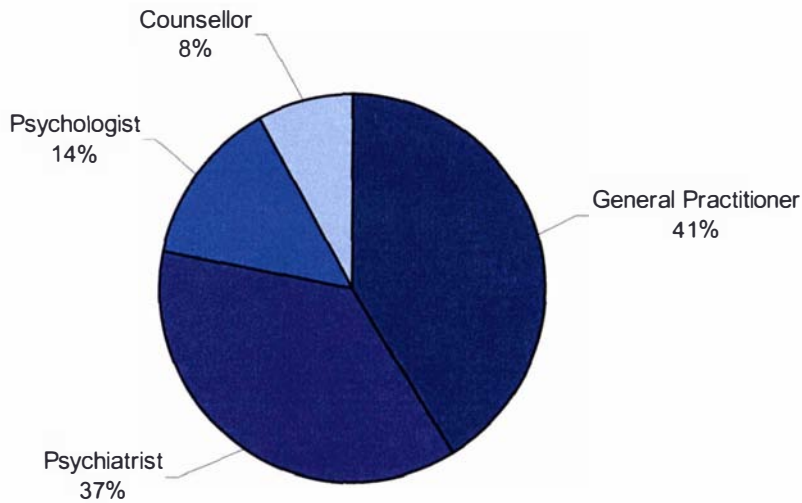


Figure 9.4. Remitted depressives. Who made the diagnosis of depression.

As shown in Figure 9.5, only 14% ($n = 6$) of participants reported only one episode of depression (i.e., zero previous episodes other than the one from which they had most recently recovered). More than half the sample (53%, $n = 33$) had had between two and four previous depressive episodes.

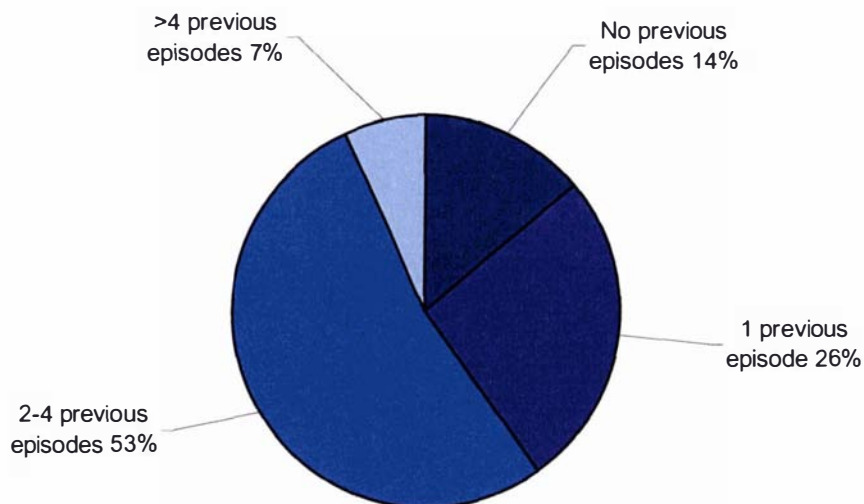


Figure 9.5. Remitted depressives. Number of previous depressive episodes.

Figure 9.6 shows that, whereas 65% ($n = 39$) of participants had not attempted suicide, 16% ($n = 10$) had attempted suicide on one occasion and a further 16% ($n = 10$) reported having attempted suicide between two and four times.

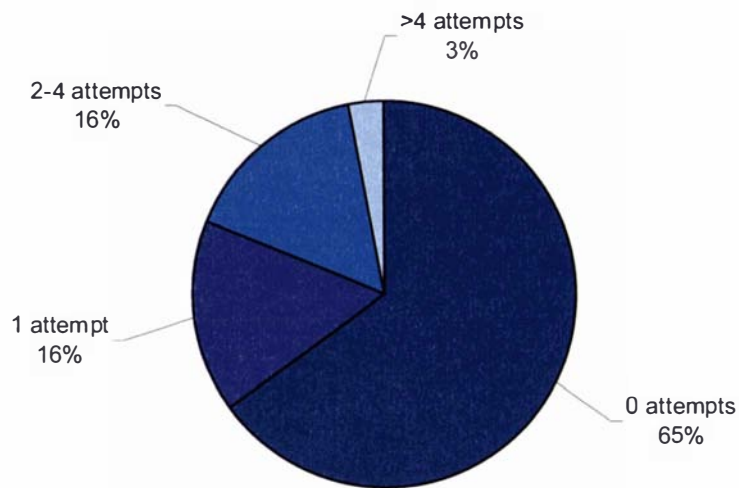


Figure 9.6. Remitted depressives. Number of suicide attempts.

Seventy-four percent of the sample had never been hospitalised for their depression, whereas 15% ($n = 9$) had been hospitalised once and 11% ($n = 7$) had been hospitalised on two or three occasions.

Descriptive Statistics

Descriptive statistics for the remitted depressives and the university students on the SAS-R, DEQ-McGill, PBI-Kendler, MOPS, BDI-II, HRSD and CSI are shown in Table 9.3. Life event variables are presented later.

Table 9.3. Mean and standard deviation scores of the SAS-R and the DEQ-McGill at Times 1, 2 and 3, for the university student and remitted depressive participants

	University Students			Remitted Depressives		
	T1	T2	T3	T 1	T2	T3
	n = 61 Mean (SD)	n = 48 Mean (SD)	n = 41 Mean (SD)	n = 61 Mean (SD)	n = 44 Mean (SD)	n = 41 Mean (SD)
SAS-R						
Sociotropy	58.87 (18.88)	56.06 (18.31)	54.63 (17.60)	59.65 (16.48)	56.34 (18.23)	55.48 (14.65)
Solitude	14.26 (6.12)	14.13 (6.79)	14.11 (5.19)	16.84 (8.18)	17.52 (7.91)	17.45 (8.41)
Independence	42.21 (7.50)	41.35 (9.27)	42.37 (6.82)	41.72 (8.97)	40.25 (8.88)	42.83 (9.37)
DEQ-McGill						
Dependency	129.97 (17.30)	130.27 (17.65)	127.13 (17.19)	132.05 (16.74)	129.81 (18.12)	128.51 (18.89)
Self-criticism	112.70 (16.22)	111.46 (15.20)	112.20 (15.58)	114.79 (18.91)	115.52 (19.97)	114.50 (16.09)
PBI-Kendler						
Warmth – m	14.53 (5.38)	15.46 (4.56)	16.03 (4.20)	11.71 (5.85)	11.75 (5.36)	12.30 (5.20)
Warmth – f	12.88 (5.81)	13.23 (5.47)	13.47 (5.51)	9.58 (5.76)	9.84 (5.67)	9.40 (5.60)
Protectiveness – m	5.05 (3.59)	4.04 (3.89)	4.57 (3.70)	6.00 (3.80)	6.41 (4.03)	6.05 (3.86)
Protectiveness – f	3.62 (3.53)	3.72 (3.75)	3.88 (3.78)	4.72 (3.46)	5.09 (3.85)	4.60 (3.59)
Authoritarianism – m	4.65 (3.01)	4.23 (2.59)	4.35 (3.00)	5.74 (2.80)	6.05 (2.83)	5.98 (3.21)
Authoritarianism – f	4.47 (3.23)	4.36 (2.94)	4.12 (3.18)	5.76 (3.15)	5.81 (3.09)	5.60 (3.05)
MOPS						
Abuse – m	1.65 (3.12)	1.08 (2.60)	1.00 (2.69)	2.67 (4.43)	2.25 (3.52)	2.15 (4.01)
Abuse – f	1.75 (3.19)	1.68 (3.06)	1.38 (3.08)	3.42 (5.11)	3.42 (5.02)	3.45 (5.17)
BDI-II total	7.17 (6.35)	7.83 (7.17)	7.15 (6.17)	4.78 (4.04)	8.15 (9.03)	5.04 (5.16)
HRSD-total	N/A	N/A	N/A	4.96 (4.19)	6.14 (6.21)	5.00 (4.50)
CSI-total	N/A	N/A	N/A	19.04 (3.64)	N/A	N/A

Note:

SAS-R = Sociotropy and Autonomy Scale, Revised; DEQ-McGill = Depressive Experiences Questionnaire, McGill Revision; PBI-Kendler = Parental Bonding Instrument, Kendler's Revision; MOPS = Measure of Parenting Style – Abuse Scale; BDI-II = Beck Depression Inventory, Second edition; HRSD = Hamilton Rating Scale for Depression; CSI = Chronic Stress Interview. T1 = Time 1; T2 = Time 2; T3 = Time 3. N/A = not applicable.

Psychometric Performance of the Measures Used in the Current Study

The reliability and the validity of the measures used in the current study were discussed in the Method section (Chapter 8). Psychometric performance of these measures in the current study is now presented.

Internal Consistency

Internal consistency scores were calculated for all research measures. Pearson's r ranged from 0.70 to 0.97, as shown in Table 9.4. Alpha coefficients for the DEQ-McGill Dependency and Self-criticism scales were slightly higher than those reported by Santor and his colleagues (Santor et al., 1997b) in a clinical sample.⁴⁴ Adequate internal consistency for all three SAS-R subscales was demonstrated (see Table 9.4).

Inter-rater Reliability

Inter-rater reliability for the HRSD and the CSI was assessed by having different team members listen to recordings of the interviews and score them independently of the original interviewer. Intra-class correlations derived from these ratings are given in Table 9.5. Of note, when the inter-rater reliability for the HRSD was calculated, the question on "agitation" was omitted as a judgement about agitation cannot be made by audiotape, i.e., without seeing the participant.

⁴⁴ The reliability coefficients for the DEQ-McGill Dependency and Self-criticism scales were 0.64 and 0.69 respectively for men and 0.69 and 0.71 respectively for women.

Table 9.4. Reliability coefficients for internal consistency

Variable	University Students (<i>n</i> = 61)	Remitted Depressives (<i>n</i> = 61)
DEQ-McGill		
Dependency	0.80	0.73
Self-criticism	0.75	0.77
SAS-R		
Sociotropy	0.90	0.84
Solitude	0.72	0.81
Independence	0.72	0.76
PBI		
Warmth – mother	0.91	0.89
Warmth – father	0.92	0.91
Protectiveness – mother	0.78	0.79
Protectiveness – father	0.83	0.70
Authoritarianism – mother	0.82	0.74
Authoritarianism – father	0.87	0.84
MOPS		
Abuse – mother	0.89	0.93
Abuse – father	0.89	0.97
BDI-II total scores	0.87	0.87
HRSD total scores	N/A	0.78

Note.

DEQ-McGill = Depressive Experiences Questionnaire, McGill Revision; SAS-R = Sociotropy and Autonomy Scale, Revised; PBI = Parental Bonding Instrument, Kendler's Revision; MOPS = Measure of Parenting Style – Abuse Scale; BDI-II = Beck Depression Inventory, Second Edition; HRSD = Hamilton Rating Scale for Depression; N/A = not applicable.

Table 9.5. Intra-class correlation coefficients for inter-rater reliability

Measure	Intra-class Correlation
Hamilton Rating Scale for Depression (HRSD)	0.81
Chronic Stress Interview (CSI)	0.74

Validity

Personality Measures

Correlations between subscales of the Depressive Experiences Questionnaire, McGill Revision (DEQ-McGill) and the Sociotropy and Autonomy Scale, Revised (SAS-R), and depressed mood at Time 1 are shown in Table 9.6. In the current study, orthogonality between Dependency and Self-criticism was retained. This was

demonstrated by insignificant correlations between Dependency and Self-criticism for the university students ($r = 0.08$) and for the remitted depressives group ($r = 0.05$). Good convergent validity for the personality constructs was demonstrated by strong and significant correlations between Dependency and Sociotropy ($r = 0.75$, university students; $r = 0.67$, remitted depressives). Also, significant correlations were found between the achievement-based constructs Self-criticism and Solitude ($r = 0.53$ for university students; $r = 0.36$ for remitted depressives). Weak correlations between Self-criticism and Independence were found ($r = 0.08$ for university students; $r = -0.01$ for remitted depressives) and are taken as reflecting the more adaptive nature of Independence. Significant negative correlations between Dependency and Independence were found ($r = -0.37$), supporting the view that Independence reflects at least to some degree the inverse of Dependency.

Evidence of convergent validity for Sociotropy and Dependency, and Self-criticism and Autonomy has previously been found by significant correlations between these constructs and depressed mood (see Chapter 8). In the current study, for university students, no significant correlations between the personality variables and BDI-II scores were seen. For the remitted depressives group, significant correlations between depressed mood and Sociotropy, Solitude and Self-criticism were found.⁴⁵ BDI-II scores were not significantly correlated with Independence. This is in line with Independence being the more adaptive personality construct. When the HRSD was used to measure depressed mood, Self-criticism was the only personality variable that significantly correlated with depressed mood.

Good divergence was demonstrated by weak and insignificant correlations between Dependency and Solitude ($r = 0.07$ for university students, and $r = -0.21$ for remitted depressives). Similarly weak and insignificant correlations were found between Sociotropy and Solitude for the remitted depressives group ($r = 0.12$). However, a significant correlation was found between Sociotropy and Solitude for the university students ($r = 0.38$). Weak to moderate but still significant correlations between Sociotropy and Self-criticism were found ($r = 0.44$ for university students; $r = 0.27$ for remitted depressives).

⁴⁵ It is worth noting that the relationships between BDI-II scores and Sociotropy and Solitude were around the same magnitude for the university students group but were not significant.

To summarise, many of the convergent and divergent relationships were as expected. In line with the intended orthogonal nature of dependency and self-criticism, no significant correlations between these two variables were found for either sample. One of the strengths of the McGill revision of the DEQ is the fact that it preserves the orthogonal nature of these two constructs. However, counter to theoretical expectations, Sociotropy was significantly correlated with Self-criticism ($r = 0.44, p < 0.01$) and Solitude ($r = 0.38, p < 0.01$) in the university student sample, and with Self-criticism ($r = 0.27, p < 0.05$) in the remitted depressive sample. Also counter to expectations, non-significant correlations between personality and BDI-II scores were found for both the university students group and the remitted depressives group. Of note, the HRSD was significantly correlated with Self-criticism but none of the other four personality variables.

Table 9.6. Correlations between subscales of the Depressive Experiences Questionnaire, McGill Revision (DEQ-McGill) and the Sociotropy and Autonomy Scale, Revised (SAS-R), and depressed mood at Time 1

	1	2	3	4	5	6
<i>University Students</i>						
1. Soc (1)						
2. Dep (1)	0.75**					
3. Sol (1)	0.38**	0.07				
4. Ind (1)	-0.15	-0.28*	-0.03			
5. S-C (1)	0.44**	0.08	0.53**	0.08		
6. BDI-II (1)	0.31	0.37	0.29	-0.16	0.40	—
<i>Remitted Depressives</i>						
1. Soc (1)						
2. Dep (1)	0.67**					
3. Sol (1)	0.12	-0.21				
4. Ind (1)	-0.05	-0.37**	0.27*			
5. S-C (1)	0.27*	0.05	0.36**	-0.01		
6. BDI-II (1)	0.29*	0.07	0.33**	0.21	0.46**	
7. HRSD (1)	0.13	0.06	0.06	-0.26	0.42**	0.45**

Note.

Soc = Sociotropy; Dep = Dependency; Sol = Solitude; Ind = Independence;

S-C = Self-criticism; BDI-II = Beck Depression Inventory, Second Edition;

HRSD = Hamilton Rating Scale for Depression.

Two-tailed significance. * $p < 0.05$; ** $p < 0.01$.

Parenting Constructs

On the strength of recent confirmatory factor analysis (Sato et al., 1999), the current study used Kendler's three-factor revision of the Parental Bonding Instrument. As outlined in Chapter 8, Parker's original scale consisted of two subfactors, namely Care and Overprotection, whereas the Kendler revision divided protection into Protectiveness and Authoritarianism. In the current study, correlations between Care (Parker) and Warmth (Kendler) were greater than $r = 0.95$ for both mother and father, in the university students group and the remitted depressives group (see Appendix X). A correlation of greater than 0.95 would indicate that there is a lot of similarity between these two constructs. Similarly, the correlations between Protectiveness (Kendler) and Overprotection (Parker) for mother and father, in the university students group and the remitted depressives group, were 0.85 or greater, indicating a great deal of similarity between these two constructs (see Appendix X). Correlations between Authoritarianism (Kendler) and Overprotection (Parker) were greater than 0.70 for the university students and greater than 0.50 for the remitted depressives (see Appendix X). Although significant, these correlations indicate that Authoritarianism and Protectiveness were not as similar as the other variables discussed earlier. This would be expected because these two subfactors were derived as separate aspects of Parker's original Overprotection subfactor.

Life Event Variables

In the current study, life event variables were calculated at Time 1, Time 2 and Time 3 separately, as well as for Time 2 and Time 3 combined (i.e., the full 12-month period prior to Time 3). Life event variables were calculated for sociotropic and autonomous events separately.⁴⁶

⁴⁶ The 110 NEQ life events were previously classified as sociotropic (44 events) or autonomous (46 events) on the basis of guidelines provided by Clark (personal communication, 2001).

Frequency of Life Events

The frequency of life events can be seen in Table 9.7.

Table 9.7. Mean and standard deviation scores for the frequency of life events at Time 1, Time 2 and Time 3, for the university student and remitted depressive participants

	University Students			Remitted Depressives		
	All	Soc	Aut	All	Soc	Aut
	Events	Events	Events	Events	Events	Events
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Time 1	3.18 (2.13)	1.30 (1.22)	1.89 (1.50)	3.46 (1.92)	1.39 (0.65)	1.67 (0.83)
Time 2	3.81 (2.52)	1.21 (1.19)	2.60 (1.97)	3.30 (1.98)	1.20 (0.41)	1.60 (0.80)
Time 3	2.92 (2.34)	0.91 (0.92)	1.86 (1.68)	4.05 (2.18)	1.63 (1.01)	1.80 (1.04)

Note. Soc = Sociotropic; Aut = Autonomous.

Negative Events Questionnaire (NEQ; Self-report Measure)

The NEQ required participants to identify any life events that occurred in the preceding 6 months, from a list of 110 life events. Also participants were asked to answer three questions (shown in Table 9.8) on a four-point rating scale, about each life event they had endorsed.

Table 9.8. Questions and the resulting variable names from the NEQ

Question on NEQ	Resulting Variable
"How upsetting was this event?"	General upset
"How much did this event result in a loss of closeness, acceptance or support from others?"	Interpersonal upset
"How much did this event result in a loss of your independence, freedom or goals?"	Achievement upset

*Episodic Life Events Inventory (ELEI; Interview Measure)*⁴⁷

A number of ratings were made (by either the participant or the interviewer) for each life event discussed. Ratings were made on a 1–5 scale. The subject of the ratings and the resultant variable names are given in Table 9.9.

Table 9.9. Ratings made during the ELEI and the resulting variable names

Ratings Made During the ELEI	Resulting Variable
Participants' rating of stress	Stress
Team rating of stress	Team rating of stress
Participants' rating of impact on relationships	Impact on relationships
Participants' rating of impact on achievement	Impact on achievement

Again, events were classified as sociotropic or autonomous based on the taxonomy suggested by Clark (personal communication, 2001). Of course, in a later chapter (see Chapter 12), additional analyses address the role of such a taxonomy as well as more subjective construals of participants.

⁴⁷ The ELEI was not administered to university students.

CHAPTER 10: DEVELOPMENTAL ORIGINS OF PERSONALITY: RESULTS AND DISCUSSION⁴⁸

Introduction

Blatt's theory states that dependency and self-criticism are two independent and enduring personality constructs that arise from different early childhood experiences. A lack of care and rejection, as well as overindulgent parenting, has been theorised to predict dependency. Self-criticism is thought to be related to strict control/overprotection, expectations of achievement and parental criticism (see Chapter 2). To investigate which childhood experiences are associated with the development of dependency and self-criticism, firstly correlational analysis was used. Correlations between personality and the parenting variables were calculated. Then, multiple regression analysis was used to determine whether retrospective reports of parenting were significant predictors of dependency and self-criticism. The findings are discussed in the context of the current literature.

Question 1. Developmental Origins of Dependency and Self-criticism

Are childhood experiences of parenting associated with the development of dependency and self-criticism?

Correlations between Personality and Parental Bonding

A full correlation matrix of Dependency, Self-criticism, measures of parenting behaviour (PBI and MOPS) and BDI-II total scores is given in Table 10.1.

University Student Sample

As shown in Table 10.1, Dependency was significantly positively correlated with maternal Warmth. Self-criticism was significantly positively correlated with maternal Protectiveness, maternal Abuse and depressed mood, and was significantly negatively correlated with maternal Warmth.

⁴⁸ A manuscript reporting on this study is currently under review in the *Australian and New Zealand Journal of Psychiatry*.

Table 10.1. Correlations between DEQ-McGill scores, measures of parental behaviour and depressed mood

	PBI- Kendler						MOPS		DEQ-McGill		Depressed Mood	
	Warmth-M	Warmth-P	Protect-M	Protect-P	Auth-M	Auth-P	Abuse-M	Abuse-P	Dep	S-C	BDI-II	HRSD
Warmth-M	–	0.47**	–0.35**	–0.28*	–0.52**	–0.51**	–0.42**	–0.15	0.30**	–0.31**	–0.19	–
Warmth-P	0.40**	–	–0.13	–0.32*	–0.26	–0.63**	–0.03	–0.32*	0.16	–0.15	–0.21	–
Protect-M	–0.23	–0.09	–	0.69**	0.54**	0.32*	0.23*	–0.19	0.06	0.44**	0.07	–
Protect-P	–0.16	–0.27*	0.26*	–	0.26*	0.52**	–0.06	–0.03	–0.03	0.14	–0.04	–
Auth-M	–0.40**	0.00	0.54**	0.01	–	0.55**	0.37**	0.14	–0.05	0.22	0.20	–
Auth-P	–0.22	–0.51**	0.21	0.52**	0.30*	–	0.20	0.33*	–0.09	0.02	–0.01	–
Abuse-M	–0.50**	–0.43**	0.18	0.21	0.31*	0.33*	–	0.50**	–0.04	0.25*	0.12	–
Abuse-P	–0.27*	–0.61**	–0.10	0.26*	–0.07	0.42**	0.46**	–	–0.10	0.05	0.14	–
Dep	–0.01	0.21	0.17	0.13	0.09	–0.10	–0.07	–0.18	–	0.08	0.21	–
S-C	–0.33*	–0.27*	–0.05	–0.02	0.05	0.09	0.03	0.04	0.05	–	0.40**	–
BDI-II total	–0.02	–0.07	–0.01	–0.03	–0.06	0.10	–0.10	–0.04	0.21	0.46*	–	–
HRSD	–0.01	–0.00	–0.08	0.04	–0.04	–0.12	0.05	0.07	0.06	0.42**	0.45**	–

Note.

University students above the diagonal ($n = 61$). Remitted depressives below the diagonal ($n = 61$). PBI-Kendler = Parental Bonding Instrument, Kendler Revision; MOPS= Measure of Parenting Style; DEQ-McGill = Depressive Experiences Questionnaire, McGill revision; BDI-II = Beck Depression Inventory, Second Edition; Dep = Dependency; S-C = Self-criticism; HRSD = Hamilton Rating Scale for Depression..
M = maternal; P = paternal. * $p < 0.05$; ** $p < 0.01$.

Remitted Depressives

As shown in Table 10.1, no statistically significant correlations were found between Dependency and the parenting variables or depressed mood. Self-criticism was significantly negatively correlated with Warmth (maternal and paternal) and significantly positively correlated with depressed mood (BDI-II and HRSD).

Multiple Regression Analysis

Assumption Checking

The subscales from the DEQ-McGill, PBI-Kendler, MOPS and BDI-II total scores were examined at Time 1.

Normality

Remitted Depressives. The Kolmogorov-Smirnov statistic indicated normality for the following variables at Time 1: Dependency, maternal and paternal Warmth, maternal Protectiveness and maternal Authoritarianism. A significant ($p < 0.05$) Kolmogorov-Smirnov statistic indicated the potential for non-normality for Self-criticism, paternal Protectiveness, paternal Authoritarianism, maternal and paternal Abuse and BDI-II total scores. However, the normality probability plot of residuals for all but three of these variables indicated normality. The exceptions were maternal Abuse, paternal Abuse and BDI-II total scores. These plots deviated from a straight line, but it was not expected that these variables would be normally distributed. Because the participants had been selected on the basis that they were not depressed, BDI-II scores would not be expected to be normally distributed. Similarly, because the incidence of child abuse in the general population is not normally distributed, it was not expected that maternal Abuse and paternal Abuse would be normally distributed.

University Students. The Kolmogorov-Smirnov statistic indicated normality for the personality variables, Dependency and Self-criticism. A significant ($p < 0.05$) Kolmogorov-Smirnov statistic and residual plots indicated non-normality for all the parenting variables, BDI-II total scores and sex.

A number of transformations were performed for both the university students and the remitted depressives in an effort to make relevant distributions more normal. The exact

transformation used for each variable depended on the original shape of the distribution. Guidelines suggested by Pallant (2001, p. 79) for transforming variables were used to make the decision of which transformation to use. However, in no case, did resultant analyses with transformed variables change the result. For this reason, the original variables were retained in the analyses (see Pallant, 2001).

Outliers

Remitted Depressives. No outliers were identified through examination of the box plots. (Outliers were defined as cases that have a standardised residual of more than 3.3 or less than -3.3; Tabachnick & Fidell, 1996.)

University Students. Examination of the box plot revealed three outliers for maternal Abuse and three outliers for paternal Abuse (one case was a common outlier for both). One outlier was identified for BDI-II total score.

Multicollinearity

Remitted Depressives. Tolerance scores from the “collinearity diagnostics” (part of the multiple regression output) were examined. These tolerance scores should not be near zero as this would indicate that the multiple correlation with other variables is high (Pallant, 2001, p. 143). In the current analysis, all tolerance scores were greater than 0.61, and tolerance scores ranged from 0.91 to 0.99 for the remitted depressives group. All of these values are considered to be acceptable. Also, for the assumption of multicollinearity to be met, correlations between the independent variables should be less than 0.7 (Pallant, 2001). This condition was met for all the variables used in the analyses. Independent variables are expected to show some relationship with the dependent variable, preferably correlations above 0.30 (Pallant, 2001). In the current research, this assumption was not met. Correlations between personality (Dependency and Self-criticism), and parenting variables, sex and depressed mood were commonly not greater than 0.30 (only 5 out of 22 possible correlations were 0.30 or more).

University Students. All the tolerance scores were greater than 0.94 (ranging from 0.95 to 0.99), satisfying Pallant’s (2001) advised criteria that tolerance scores should not be near zero. Of the bivariate correlations calculated for these variables, all met Pallant’s guideline that correlations between independent variables should be below

0.70. Again, correlations between personality (Dependency and Self-criticism), and parenting variables, sex and depressed mood were commonly not greater than 0.30 (only 5 out of 20 possible correlations were 0.30 or more). Although hierarchical multiple regression analysis is fairly robust to this (Tabachnick & Fidell, 1996; Pallant, 2001) it is noted that ideally correlations between variables would have been greater.

Multiple Regression Analysis for the University Students Group

Hierarchical multiple regression analysis (HMR) was conducted with the Dependency and Self-criticism subscales as the criterion variables. In the HMRs, the criterion variables were regressed on to three variables/sets of variables in the following order: sex, depressed mood and parenting variables (PBI-Kendler and MOPS scores).

Forty-five percent of the variance (33.5% adjusted) in Self-criticism was explained, $F(10, 47) = 3.88, p \leq 0.001$ (see Table 10.2).

Sex

Sex was entered as the first step in the model. Sex was not a significant predictor of Self-criticism, $F(1, 56) = 0.05, p = ns$.

Depressed Mood

BDI-II total scores were entered as the second step of the multiple regression.

Inspection of Table 10.2 indicates that depressed mood scores explained a significant unique change in the variance in Self-criticism of 11.8% (adjusted) when entered after sex, $F(2, 55) = 5.45, p < 0.01$ (Beta = 0.41).

Parenting Variables

The third block of variables entered was the parenting variables (PBI and MOPS scores). These variables accounted for a unique change of 20% (adjusted) in Self-criticism, $F(10, 47) = 3.88, p \leq 0.001$. Beta coefficients indicated that maternal Protectiveness was the only parenting variable to make a significant contribution to Self-criticism (Beta = 0.92, $p \leq .001$). Paternal Protectiveness (Beta = -0.47) was nearly significant ($p = 0.057$). A final inspection of Table 10.2 shows that, once all the factors

were included within the regression, maternal Protectiveness and depressed mood were statistically significant predictors of Self-criticism.^{49,50}

HMRs involving Dependency were not statistically significant (p values > 0.05).

Multiple Regression Analysis for the Remitted Depressives Group

HMRs were conducted with Dependency and Self-criticism subscales as the criterion variables. In the HMRs, the criterion variables were regressed on to the three sets of variables in the following order: sex, depressed mood and parenting variables (PBI and MOPS scores).

Forty-two percent of the variance (30% adjusted) in Self-criticism was explained, $F(10, 47) = 3.42, p < 0.01$ (see Table 10.2).

Sex

Sex was entered as the first step in the model and explained 9.7% (adjusted) of the variance in Self-criticism, $F(1, 56) = 6.02, p < 0.05$ (Beta = -0.31), with being male predicting Self-criticism.

Depressed Mood

BDI-II total scores were entered as the second step of the multiple regression.

Inspection of Table 10.2 indicates that depressed mood scores explained a statistically significant unique change 15.6% (adjusted) in the variance in Self-criticism when entered after Sex, $F(2, 55) = 9.86, p < 0.001$ (Beta = 0.41).

⁴⁹ Hierarchical multiple regression analyses (HMRs) were conducted without the Abuse (MOPS) variables to allow comparison with previous research (e.g., Brewin et al., 1992; Enns et al., 200; McCranie & Bass, 1984). The statistically significant factors in the HMR equations were the same with and without Abuse.

⁵⁰ Owing to the possibility of a type II error, an additional HMR was conducted, again with Sex (step 1) and the BDI-II (step 2), but this time with just the parenting variables that were significantly correlated with Self-criticism in the correlational analysis. The results of this HMR were the same as those of the previous analysis, with maternal Protectiveness emerging as the only statistically significant parenting predictor of Self-criticism for the university students group.

Table 10.2. Hierarchical multiple regression of Self-criticism scores on sex, depressed mood and parenting variables for the remitted depressives and the university students

Predictor	University Students (<i>n</i> = 61)			Remitted Depressives (<i>n</i> = 61)		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Sex	−0.03	−0.06	0.09	−0.31*	−0.23*	−0.26*
BDI-II		0.41**	0.30**		0.41*	0.37**
Parenting Variables						
PBI-Kendler						
Warmth (m)			−0.26			−0.34*
Warmth (f)			−0.02			−0.21
Protectiveness (m)			0.92*			−0.02
Protectiveness (f)			−0.47			−0.04
Authoritarianism (m)			−0.29			0.05
Authoritarianism (f)			−0.06			0.03
MOPS						
Abuse (m)			−0.14			−0.13
Abuse (f)			0.28			−0.08
<i>R</i>	0.03	0.41	0.67	0.31	0.51	0.65
<i>R</i> square	0.001	0.17	0.45	0.10	0.26	0.42
Adjusted <i>R</i> square	−0.02	0.14	0.34	0.08	0.24	0.30
<i>R</i> square change	0.00	0.16	0.29	0.10	0.17	0.16

Note.

PBI = Parental Bonding Instrument, Kendler's Revision; MOPS = Measure of Parenting Style – Abuse Scale; BDI-II = Beck Depression Inventory, Second Edition.

* $p < 0.05$; ** $p < 0.01$.

Parenting Variables

The third block of variables entered included parenting variables (PBI and MOPS scores). The addition of these parenting variables accounted for a unique change of 6.1% (adjusted) of the variance in Self-criticism, $F(10, 47) = 3.42, p < 0.01$. Maternal Warmth was the only parenting variable to make a statistically significant contribution to Self-criticism (Beta = $-0.34, p < 0.05$). A final inspection of Table 10.2 shows that, once all the factors were included within the regression, maternal Warmth and depressed mood were statistically significant predictors of Self-criticism.^{51,52}

HMRs involving Dependency were not statistically significant (all p values > 0.05).

⁵¹ Hierarchical multiple regression analyses (HMRs) were conducted without the Abuse (MOPS) variables to allow comparison with previous research. The statistically significant factors in the HMR equations were the same with and without Abuse.

⁵² Owing to the possibility of a type II error, an additional HMR was conducted, again with Sex (step 1) and the BDI-II (step 2), but this time with just the parenting variables that were significantly correlated with Self-criticism in the correlational analysis. The results of this HMR were the same as those of the previous analysis, with maternal Warmth emerging as the only statistically significant predictor of Self-criticism for the remitted depressives.

Discussion

Blatt and his colleagues (Blatt, 1974; Blatt & Blass, 1990; Blatt & Shichman, 1983) proposed that the most important factors in the development of dependent and self-critical personality styles are parent-child interactions during childhood. Partially in support of this claim, and in line with prior research (Brewin et al., 1992, 1996; Enns et al., 2000; Firth-Cozens, 1992; Koestner et al., 1991; McCranie & Bass, 1984; Rosenfarb et al., 1994; Sadeh et al., 1993; Whiffen & Sasseville, 1991), the present study showed that parenting variables were an important predictor of self-criticism in a group of university students. In addition, it was demonstrated that parenting variables were also a significant predictor of self-criticism in a group of remitted depressives. As in similar studies, dependency did not produce compelling relationships with parenting factors other than a bivariate relationship with maternal warmth in the university student sample. Thus, the initial and main focus of this discussion is on self-criticism.

In line with Blatt's theory (Blatt, 1974) and previous research (Enns et al., 2000; McCranie & Bass, 1984; Whiffen & Sasseville, 1991), but contrary to other research (Brewin et al., 1996; Firth-Cozens, 1992; Mendelson et al., 2002), protectiveness emerged as the main predictor of self-criticism for the university students group in the current study. In particular, maternal protectiveness was a significant predictor of self-criticism, with paternal protectiveness being close to significant. Although McCranie and Bass (1984) hypothesised that self-criticism was more likely to develop when the father dominated family decision-making and participated more actively in child rearing,⁵³ this was not supported in their study. Instead, non-significant associations between self-criticism and paternal dominance were found. In addition, the other main finding in the current study was that for the remitted depressives group, lack of maternal warmth emerged as a significant predictor of self-criticism.

It is interesting to note that it was the university students group and not the remitted depressives group that produced findings more in line with Blatt's (1974) theory, namely that self-criticism is associated with overprotectiveness⁵⁴ amongst other things.

⁵³ Conversely, they predicted that dependency would be more likely to emerge when the mother plays a more influential role than the father in family decision-making and child rearing.

⁵⁴ The Protectiveness subscale of Kendler's revision of the Parental Bonding Instrument (PBI) is similar to the Overprotection subscale of the original PBI (Parker et al., 1979).

Mendelson et al. (2002) suggested that the parenting styles assessed by the PBI may be more relevant for non-clinical samples as opposed to clinical samples who may have experienced more extreme parenting experiences such as abuse. However, in the current research, a measure of parental abuse was included but did not emerge as a significant predictor of self-criticism in the remitted depressives group. Although maternal abuse was significantly correlated with self-criticism in the university students group, it became non-significant once the effects of depression were controlled.

Statistically significant correlations were found between self-criticism and depressed mood in the university students group and the remitted depressives group. Further, depressed mood accounted for a significant amount of the variance in self-criticism in the regression analyses for both groups. In line with previous research (Brewin et al., 1992; Enns et al., 2000; Mendelson et al., 2002; Whiffen & Sasseville, 1991), it was found that controlling for current depressive symptoms using regression analysis reduced the number of significant relationships between the parenting variables and self-criticism. Parenting variables that had been significantly correlated with dependency and self-criticism in the correlational analyses became non-significant in the regression analyses.

In particular, in the present study, correlational analyses suggested that self-criticism was associated with maternal protectiveness in the university students and both maternal and paternal lack of warmth in the remitted depressives. However, subsequent regression analyses indicated that only the mother's attributes on separate factors were significant in each group, respectively. Such findings make it clear that multiple regression analysis provides an increasingly differentiated picture and should be used to supplement bivariate analysis. Although simple correlational analysis provides useful information, it is necessary for future research to partial out the effects of current depression. For this reason, hierarchical regression analysis is endorsed as a useful statistical method. It is also recommended that future research continue to use clinical and at-risk samples. Remitted depressives fit well because they represent individuals who are vulnerable to depression but are not currently depressed. This avoids the confounding effects of current depressive status (see also Coyne & Whiffen, 1995).

In line with previous research (e.g., McCranie & Bass, 1984; Parker & Lipscombe, 1981) with one exception, relationships between dependency and parenting variables were not statistically significant in the present study.⁵⁵ One potential reason suggested by Blatt and Zuroff (1992) for the lack of a significant relationship between reports of inconsistent parental love and dependency in prior research is that dependent individuals may have internalised the tendency to minimise any dissatisfaction with parents owing to the nature of dependency itself. In particular, they may fear losing the relationship with their parent, which, according to Blatt (1974), they feel is essential for their survival. This idea needs to be studied directly in future research.

The important question of whether reports of negative parenting by currently depressed individuals is an accurate description of the parent-child interaction or whether they are a function of the current negative mood state has been raised (Gerlsma, Emmelkamp, & Arrindale, 1990, cited in Blatt & Zuroff, 1992; Lewinsohn & Rosenbaum, 1987, cited in Blatt & Zuroff, 1992). In the current study, participants were not currently depressed. For example, whereas some of the university students group could have been depressed at the time of data collection, analysis showed that none of the university students had a BDI score of 17 or more. The mean score on the BDI-II for this group was well within the non-depressed range ($M = 7.17$, $SD = 6.35$). Thus, in combination with partial correlational analyses, concerns about a negative induced response bias are minimised.

A few methodological issues and limitations should be noted. First, the majority of participants were female. This along with the sample size did not allow for an investigation of same sex versus opposite sex participants. Analysing results separately for males and females might help to produce a more differentiated picture. Larger sample sizes using the revised versions of the measures as used in the current study (DEQ-McGill and PBI, Kendler's Revision) with separate regression analyses for men and women are recommended. Certainly, it seems that the determinants of self-criticism and dependency are more complex than originally thought by Blatt (1974). Although there is evidence that negative parenting is broadly associated with negative affectivity (Rapee, 1997),⁵⁶ more research with rigorous methodology needs to be conducted to

⁵⁵ The one exception was that dependency was found to be correlated with maternal warmth.

⁵⁶ Rapee (1997) reviewed the literature on the role of child-rearing practices in the development of anxiety and depression (see also Chapter 2).

determine whether consistent relationships between parenting styles and vulnerability factors such as self-criticism and dependency can be found. As this research has suggested, sampling is a particularly important consideration.

CHAPTER 11: STABILITY OF PERSONALITY AND PREDICTORS OF CHANGE: RESULTS AND DISCUSSION

Introduction

Blatt's (1974) theory states that dependency and self-criticism are stable trait-like structures. In contrast to this view, Coyne and Whiffen (1995) suggest that elevations on dependency and self-criticism may reflect difficult life circumstances. The literature pertaining to these alternate theories, was reviewed in Chapter 3. To examine the question of construct stability, two sets of recommended data analytic strategies were used. First, to assess absolute stability, changes in mean scores on the SAS-R and the DEQ-McGill across 6 months and 12 months were examined. Second, test-retest correlations were used to assess the relative stability of the personality constructs over time. For those personality variables that did show change over time, regression analyses were additionally used to identify factors that contributed to a change in personality scores. Finally, those participants with the greatest change in personality over the 1-year period of the study were identified, and exploratory analysis was conducted with this smaller group. Findings are placed within the context of the current literature.

Question 2. Social Context and Personality

Are dependency and self-criticism, and sociotropy and autonomy⁵⁷ trait-like features of personality and to what extent are they influenced by stressful life circumstances?

The first step in investigating whether an individual's score on the personality variables from the SAS-R (Sociotropy, Solitude and Independence) and the DEQ-McGill (Dependency and Self-criticism) were affected by stressful life circumstances was to test whether scores from the SAS-R and DEQ-McGill subscales changed over time.⁵⁸

⁵⁷ Autonomy is operationalised into two subfactors: Solitude and Independence, in line with the Revised Sociotropy and Autonomy Scale (SAS-R; Clark et al., 1995).

⁵⁸ Means and standard deviations of the SAS-R and DEQ-McGill subscales for Time 1, Time 2 and Time 3 can be seen in Table 9.6.

Absolute Stability

Change scores on personality measures from Time 1 to Time 2 (6 months) and Time 1 to Time 3 (12 months) are presented in Table 11.1. A number of paired sample t-tests were conducted to evaluate whether there was a significant change in the personality scores for these time frames. As seen in Table 11.1, there were no statistically significant differences over the 6-month time period on Sociotropy, Dependency, Self-criticism, Solitude or Independence for either the university students group or the remitted depressives group (p values > 0.10).

For the longer time period (12 months), there was a statistically significant decrease between scores on Sociotropy from Time 1 ($M = 58.97$, $SD = 18.85$) to Time 3 ($M = 54.63$, $SD = 17.60$), $t(39) = 2.52$, $p < 0.05$ for the university students. The eta-squared statistic (0.16) indicated a large effect size.⁵⁹ No statistically significant difference was found from Time 1 to Time 3 for the university students on any of the other personality scores (p values > 0.10).

For the remitted depressives group over the 12-month period, there was a close to statistically significant decrease between scores on Sociotropy from Time 1 ($M = 59.65$, $SD = 16.48$) to Time 3 ($M = 55.48$, $SD = 14.65$), $t(39) = 2.00$, $p = 0.05$. The eta-squared statistic (0.09) indicated a moderate effect size. There was a statistically significant decrease between scores on Dependency from Time 1 ($M = 132.05$, $SD = 18.89$) to Time 3 ($M = 128.51$, $SD = 16.31$), $t(37) = 2.16$, $p < 0.05$. The eta-squared statistic (0.11) indicated a moderate effect size. No statistically significant difference was found from Time 1 to Time 3 on the scores for Self-criticism, Solitude or Independence for the remitted depressives group (p values > 0.10).

A summary of the results of the paired sample t-tests is shown in Table 11.2. These results are in line with previous research (presented in Chapter 3) which, although mixed, to some extent has largely shown autonomy to be stable over time, with sociotropy being less so (Fairbrother & Moretti, 1998; Moore & Blackburn, 1996; Zuroff et al., 1983).

⁵⁹ To interpret the eta-squared values, the following values were used: 0.01 = small effect, 0.06 = moderate effect and 0.14 = large effect (Cohen, 1988).

Table 11.1. Absolute change in personality over the 6- and 12-month periods

	M	SD	SE	t⁶⁰	p
Time 1–Time 2 (6 months)					
University students (n = 48)					
ΔSociotropy	–1.85	10.32	1.49	1.25	0.22
ΔDependency	–2.26	10.43	1.51	1.50	0.14
ΔSolitude	0.69	4.43	0.64	–1.08	0.29
ΔIndependence	–0.25	6.71	0.97	0.26	0.80
ΔSelf-criticism	1.25	10.33	1.49	–0.84	0.41
Remitted depressives (n = 44)					
ΔSociotropy	–2.27	12.89	1.49	1.17	0.25
ΔDependency	–1.09	8.97	1.51	0.80	0.43
ΔSolitude	0.02	4.80	0.64	–0.03	0.98
ΔIndependence	–0.32	8.46	0.97	0.25	0.80
ΔSelf-criticism	0.81	15.16	1.49	–0.35	0.73
Time 1–Time 3 (12 months)					
	M	SD	SE	t	p
University students (n = 41)					
ΔSociotropy	–4.34	10.18	1.72	2.52	0.02
ΔDependency	–3.05	13.07	2.04	1.50	0.14
ΔSolitude	0.80	5.28	0.89	–0.90	0.50
ΔIndependence	0.11	6.27	1.06	–0.11	0.38
ΔSelf Criticism	1.16	10.99	1.72	–0.70	0.92
Remitted depressives (n = 41)					
ΔSociotropy	–4.18	13.23	2.09	1.10	0.05
ΔDependency	–3.53	10.10	1.64	2.16	0.04
ΔSolitude	0.03	7.34	1.16	–0.02	0.98
ΔIndependence	1.53	6.50	1.03	–1.49	0.15
ΔSelf Criticism	–0.52	16.44	2.67	0.20	0.85
Note.					
Δ = Change in.					
Degrees of freedom for university students ranged from 40 to 47 due to missing data.					
Degrees of freedom for remitted depressives ranged from 37 to 43 due to missing data.					

⁶⁰ Partial t-test results comparing mean scores at the two time intervals.

Table 11.2. Summary of paired sample t-tests on change scores for SAS-R and DEQ-McGill variables over the 6- and 12-month periods

	Interpersonal Variables		Achievement Variables		
	Sociotropy (SAS-R)	Dependency (DEQ)	Solitude (SAS-R)	Independence (SAS-R)	Self-criticism (DEQ)
6 months					
University students	No change	No change	No change	No change	No change
Remitted depressives	No change	No change	No change	No change	No change
12 months					
University students	Change (large effect size)	No change	No change	No change	No change
Remitted depressives	Change (moderate effect size)	Change (moderate effect size)	No change	No change	No change

Note.

SAS-R = Sociotropy and Autonomy Scale, Revised; DEQ = Depressive Experiences Questionnaire, McGill Revision.

Relative Stability

Test-retest Correlations between Time 1 and Time 3 (12 Months)

In line with more recent research on the stability of personality (Bagby et al., 2001; Santor et al., 1997a; Zuroff et al., 1999),⁶¹ test-retest correlation coefficients were calculated as an estimate of relative stability. A full correlation coefficient matrix showing these test-retest correlations (Time 1 to Time 3) between the personality variables, as well as BDI-II and HRSD total scores, is presented in Table 11.3 (also summarised in Table 11.4).

⁶¹ Bagby et al. (2001) examined PSI Sociotropy and PSI Autonomy. Santor et al. (1997a) examined stability of NEO-Extraversion and NEO-Neuroticism.. Zuroff et al. (1999) examined the stability of subscales from the DAS. All of these used the current analytic strategy.

Table 11.3. Correlations for the SAS-R and DEQ-McGill subscales, as well as BDI-II and HRSD scores (Time 1 to Time 3)

	1	2	3	4	5	6	7	8	9	10	11	12	13
U. Students													
1. Soc (1)	—												
2. Soc (3)	0.85**	—											
3. Dep (1)	0.75**	0.66**	—										
4. Dep (3)	0.64**	0.82**	0.71**	—									
5. Sol (1)	0.38**	0.33	0.07	0.13	—								
6. Sol (3)	0.15	0.18	0.05	0.02	0.53**	—							
7. Ind (1)	-0.15	-0.25	-0.27*	-0.18	-0.03	0.03	—						
8. Ind (3)	-0.02	-0.04	-0.03	-0.16	0.16	0.09	0.66**	—					
9. S-C (1)	0.44**	0.49**	0.08	0.37*	0.53**	0.24	0.08	-0.18	—				
10. S-C (3)	0.50**	0.46**	0.16	0.32*	0.33*	0.46**	0.06	-0.22	0.77**	—			
11. BDI (1)	0.31**	0.18	0.21	0.23	0.29*	0.23	0.02	-0.07	0.40**	0.40**	—		
12. BDI (3)	0.55**	0.58**	0.40*	0.58**	0.22	0.14	-0.29	-0.33	0.57**	0.57**	0.53**	—	
R. Depressives													
1. Soc (1)	—												
2. Soc (3)	0.65**	—											
3. Dep (1)	0.67**	0.58**	—										
4. Dep (3)	0.65**	0.65**	0.85**	—									
5. Sol (1)	0.11	-0.03	-0.21	-0.29	—								
6. Sol (3)	-0.08	0.19	-0.11	-0.20	0.59**	—							
7. Ind (1)	-0.05	0.11	-0.36**	-0.36*	0.27*	0.38*	—						
8. Ind (3)	-0.17	0.14	-0.31*	-0.35*	0.33*	0.56**	0.77**	—					
9. S-C (1)	0.27*	-0.04	0.05	0.08	0.36**	-0.12	-0.01	-0.32	—				
10. S-C (3)	0.23	0.24	0.09	0.07	0.02	-0.19	0.02	-0.22	0.55**	—			
11. BDI (1)	0.29*	0.02	0.09	-0.01	0.33**	0.32*	0.21	0.15	0.46**	0.28	—		
12. BDI (3)	-0.07	-0.25	-0.06	-0.10	0.29	-0.12	-0.14	-0.30	0.55**	0.54**	0.45*	—	
13. HRS (1)	0.13	-0.10	0.06	0.09	0.06	-0.00	-0.26	-0.23	0.42	0.16	0.45**	0.10	—
14. HRS (3)	0.18	0.04	0.23	0.35	0.14	-0.09	-0.35	-0.38	0.31	0.30	0.02	0.64**	0.36

Note.

$n = 41$; * $p < 0.05$; ** $p < 0.01$. Bold coefficients are intra-class stability coefficients.

U. Students = university students; R. Depressives = remitted depressives.

Soc = Sociotropy; Dep = Dependency; Sol = Solitude; Ind = Independence; S-C = Self-criticism;

BDI = Beck Depression Inventory, Second Edition; HRS = Hamilton Rating Scale for Depression.

(1) = administered at baseline; (3) = administered at 12-month follow-up.

Test-retest correlation coefficients for the personality variables ranged from 0.53 to 0.85 for the university students, and from 0.55 to 0.85 for the remitted depressives. All correlations were significant ($p < 0.01$). Test-retest correlations were stronger for the university students than the remitted depressives for Sociotropy ($r = 0.85$ versus $r = 0.65$, respectively) and for Self-criticism ($r = 0.75$ versus $r = 0.55$, respectively). Test-retest correlations for the other personality variables (Dependency, Solitude and Independence) were stronger for the remitted depressives group. Bagby et al. (2001), the only previous study to examine the relative stability of sociotropy and autonomy, obtained test-retest correlation coefficients of 0.77 for both PSI Sociotropy and PSI Autonomy in a group of depressed outpatients (versus 0.65 for Sociotropy, 0.53 for Solitude⁶² and 0.66 for Independence, in the remitted depressives group in the current study).

Also shown in Table 11.3 are test-retest correlations from Time 1 to Time 3 for depressed mood (BDI-II and HRSD). Test-retest correlation coefficients for BDI-II for both the university students ($r = 0.53$) and the remitted depressives ($r = 0.45$) were significant (p values < 0.01). However, previous researchers (Bagby et al., 2001; Santor et al., 1997a; Zuroff et al., 1999) would consider correlation coefficients in this range to be, in relative terms, low. Test-retest coefficients for the BDI-II scores in the present study were similar in size to those reported by Santor et al. (1997a) following a 5-week pharmacotherapy trial ($r = 0.54$) and by Bagby et al. (2001) after a mean of 20 treatment sessions ($r = 0.42$).⁶³ A smaller BDI test-retest correlation coefficient ($r = 0.25$) was found by Zuroff et al. (1999). Participants in the study of Zuroff et al. received a variety of interventions including cognitive behaviour therapy, clinical management, pharmacotherapy and placebo over a 10-week period. In the current study, the test-retest correlation coefficient for the HRSD⁶⁴ was smaller and nonsignificant ($r = 0.36$) compared with a significant correlation ($r = 0.45$) for the BDI-II in the remitted depressives group.

To further investigate the relative stability of personality variables, test-retest correlations for Time 1 to Time 2, Time 2 to Time 3 and Time 1 to Time 3 were calculated (shown in Table 11.4). Again, Sociotropy and Dependency consistently showed the highest test-retest correlation coefficients (i.e., relative stability) across the three time frames. Although there

⁶² In the current study, Autonomy was divided into two separate subscales (Solitude and Independence).

⁶³ Bagby et al. (2001), Santor et al. (1997a) and Zuroff et al. (1999) all used the BDI, First Edition, as opposed to the current study, which used the BDI, Second Edition.

⁶⁴ Only the remitted depressive participants received the HRSD.

is no objective criterion to define test-retest correlations between variables as relatively stable or not, previous researchers (Bagby et al., 2001; Santor et al., 1997a; Zuroff et al., 1999) discuss correlation coefficients of the order of 0.70 and 0.80 as being high, demonstrating relative stability, whereas those lower (below 0.70) have been taken as having less stability. The current researcher emailed D.A. Santor to clarify what values he would consider to be high versus low in relative terms. However no reply email was received.

Table 11.4. Test-retest correlation coefficients for SAS-R and DEQ-McGill constructs, BDI-II and HRSD for the university students and the remitted depressives

	Time 1 to Time 2	Time 2 to Time 3	Time 1 to Time 3
University students			
Sociotropy	0.84**	0.86**	0.85**
Dependency	0.82**	0.84**	0.71**
Solitude	0.76**	0.60**	0.53**
Independence	0.70**	0.53**	0.66**
Self-criticism	0.78**	0.80**	0.76**
BDI-II	0.73**	0.63**	0.53**
Remitted depressives			
Sociotropy	0.72**	0.81**	0.64**
Dependency	0.88**	0.84**	0.85**
Solitude	0.81**	0.79**	0.58**
Independence	0.57**	0.68**	0.77**
Self-criticism	0.69**	0.67**	0.55**
BDI-II	0.25	0.60**	0.45**
HRSD	0.62**	0.77**	0.36
Note. HRSD = Hamilton Rating Scale for Depression; BDI-II = Beck Depression Inventory, Second Edition; SAS-R = Sociotropy and Autonomy Scale, Revised; DEQ-McGill = Depressive Experiences Questionnaire, McGill Revision. n = 41. *p < 0.05; **p < 0.01.			

Relationship between Personality and Depressed Mood

Concurrent Relationships between Personality and Depressed Mood

Concurrent correlations between the personality variables and depressed mood at Time 1 and at Time 3 are summarised in Table 11.5. There were a number of significant correlations between the personality variables and depressed mood, for both the university students group and the remitted depressives group.

Table 11.5. Relationship between personality and depressed mood at Time 1 and Time 3

	Time 1		Time 3	
	BDI-II (T1)	HRSD (T1)	BDI-II (T3)	HRSD (T3)
University students				
<i>Time 1</i>				
Sociotropy (T1)	0.31**	—	—	—
Dependency (T1)	0.21	—	—	—
Solitude (T1)	0.29*	—	—	—
Independence (T1)	0.02	—	—	—
Self-criticism (T1)	0.40**	—	—	—
<i>Time 3</i>				
Sociotropy (T3)	—	N/A	0.58**	N/A
Dependency (T3)	—	N/A	0.58**	N/A
Solitude (T3)	—	N/A	0.14	N/A
Independence (T3)	—	N/A	−0.33	N/A
Self-criticism (T3)	—	N/A	0.57**	N/A
Remitted depressives				
<i>Time 1</i>				
Sociotropy (T1)	0.29**	0.13	—	—
Dependency (T1)	0.09	0.06	—	—
Solitude (T1)	0.33**	0.06	—	—
Independence (T1)	0.21	−0.26	—	—
Self-criticism (T1)	0.46**	0.42	—	—
<i>Time 3</i>				
Sociotropy (T3)	—	—	−0.25	0.04
Dependency (T3)	—	—	−0.10	0.35
Solitude (T3)	—	—	−0.12	−0.09
Independence (T3)	—	—	−0.30	−0.38
Self-criticism (T3)	—	—	0.54**	0.30

Note.

BDI-II = Beck Depression Inventory, Second Edition; HRSD = Hamilton Rating Scale for Depression; T1 = Time 1; T3 = Time 3. N/A = not applicable. * $p < 0.05$; ** $p < 0.01$.

For the university students, Sociotropy and Self-criticism at both Time 1 and Time 3 demonstrated significant concurrent relationships with depressed mood. For the remitted depressives group, Sociotropy, Solitude and Self-criticism showed significant correlations with depressed mood at Time 1, but only Self-criticism was significantly correlated with depressed mood at Time 3.

Zuroff et al. (1999) suggested that significant concurrent correlations between personality and depressed mood are indicative of state-dependence. In the research of Zuroff et al., concurrent correlations at intake were smaller (and, in some cases, not significant) than at follow-up. In the current study, for the remitted depressives group, concurrent correlations

were smaller at Time 3. However, because it was a requirement of the study that participants were not depressed at the beginning of the study (the opposite of a treatment outcome study such as that of Zuroff et al. (1999), where it is required that participants are depressed at intake), the results of the current study are not incompatible with the findings of Zuroff et al. Of note, at no time did the SAS-R Independence scale correlate with depressed mood. This may well reflect the more adaptive nature of Independence.

Also of note, self-report and interview measures of depressed mood behaved quite differently. Although there were a number of significant correlations between the personality variables (SAS-R and DEQ-McGill) and BDI-II total scores at both Time 1 and Time 3, there were no significant correlations between personality and HRSD total scores. Previous research has shown the relationship between personality variables and self-reported distress (measured by BDI scores) to be greater than the relationship between personality variables and diagnosed clinical depression (Coyne & Whiffen, 1995). The HRSD has been shown to more closely assess symptoms of clinical depression compared with the BDI-II. For example, the BDI has been criticised for not assessing enough of the biological symptoms of depression, whereas the HRSD covers these biological symptoms well (Lambert, Hatch, Kingston, & Edwards, 1986). The issue of method variance may play a role in this pattern of relationships.

The extent to which relative differences in personality might be accounted for by depressed mood is now examined.

Amount of Change in Personality Accounted for by Depression

In line with previous research (Bagby et al., 2001; Santor et al., 1997a; Zuroff et al., 1999), the extent to which relative differences in personality scores might be accounted for by individual differences in severity of depressed mood was assessed.

In the present research, two separate hierarchical multiple regression analyses (HMRs) were performed using follow-up Sociotropy and follow-up Dependency as the criterion variables. For the first equation, Sociotropy at Time 3 was regressed on to three variables in the following order: depressed mood at Time 1, depressed mood at Time 3 and Sociotropy at Time 1. For the second equation, Dependency at Time 3 was regressed on to three variables

in the following order: depressed mood at Time 1, depressed mood at Time 3 and Dependency at Time 1.

Neither HMR was statistically significant (all p values > 0.05). This indicates that, when assessed together, follow-up Sociotropy scores were not predicted by initial Sociotropy scores or by depressed mood. Similarly, follow-up Dependency scores were not predicted by initial Dependency scores or by depressed mood.

In following the methodology of Santor et al. (1997a), the extent to which changes in personality scores can be accounted for by changes in depressed mood was also assessed by regressing change scores for Sociotropy (Time 1 to Time 3) on to change scores for depressed mood (BDI-II and HRSD, Time 1 to Time 3). This was repeated with change scores for Dependency (Time 1 to Time 3) being regressed on to change scores for depressed mood (BDI-II and HRSD, Time 1 to Time 3).

Because the HRSD was not administered to university students, it was not possible to do regression analysis for this group (as, without HRSD total scores, there is only one independent variable, namely BDI-II total scores). However, the correlation between change scores for Sociotropy (Time 1 to Time 3) and change scores for BDI-II total scores (Time 1 to Time 3) in the university students group was not significant ($r = 0.07$, $p = 0.74$). Similarly, the correlation between change scores for Dependency (Time 1 to Time 3) and change scores for BDI-II total scores (Time 1 to Time 3) in the university students group was not significant ($r = 0.05$, $p = 0.83$).

Change scores for Sociotropy (Time 1 to Time 3) were regressed on to change scores for BDI-II (Time 1 to Time 3) and change scores for HRSD (Time 1 to Time 3). The results demonstrated that the overall model was not significant. The correlation coefficient between change in Sociotropy and change in BDI-II total score was $r = 0.07$, $p = 0.74$ (two-tailed). The correlation coefficient between change in Sociotropy and change in HRSD total score was $r = 0.00$, $p = 0.99$ (two-tailed).

Change scores for Dependency (Time 1 to Time 3) were regressed on to change scores for BDI-II (Time 1 to Time 3) and change scores for HRSD (Time 1 to Time 3). The results demonstrated that the overall model was not significant. The correlation coefficient between

change in Dependency and change in BDI-II total score was $r = 0.05$, $p = 0.82$ (two-tailed). The correlation coefficient between change in Dependency and change in HRSD total score was $r = 0.2$, $p = 0.39$ (two-tailed).

Summary: Absolute and Relative Stability

The results thus far have demonstrated significant absolute changes in Sociotropy (university students and remitted depressives) and Dependency (remitted depressives) over the 1-year period. This was evident from paired sample t-tests (summarised in Table 11.2). In combination with this finding, relative stability, as assessed by using test-retest correlations (from Time 1 to Time 3), indicated that Sociotropy and Dependency also demonstrated the most relative stability of all the personality constructs. This is consistent with the view of Zuroff et al. (1999) that it is possible for a group to show large and significant changes in mean scores on a trait (low absolute stability) and yet demonstrate high relative stability (i.e., the absolute changes were similar across the sample). Having established that the interpersonal variables had low absolute stability yet high relative stability leads to the question: of what accounts for this pattern? There are several possibilities. This pattern of results would be expected if there was a significant life event that affected everybody in the sample. An example of a life event that might affect a whole population would be the 9/11 Terrorist attack (11/09/01: New York).⁶⁵ However, in the current sample, it is unlikely that there was a significant negative life event that affected all participants. Another explanation is that, over the period of a year, most people experience significant interpersonal life events that affect their scores on the interpersonal subscales of the DEQ and the SAS-R. However, this does not fully explain why there would be a significant decrease in absolute stability of the interpersonal variables, as some interpersonal events would be expected to increase and some would be expected to decrease scores on interpersonal variables. Another explanation is that it is a statistical artefact, for example regression to the mean.

Although many of the personality variables were significantly correlated with depressed mood (especially BDI-II total scores) at both Time 1 and Time 3 (see Table 11.5), multiple regression analysis showed that depressed mood was not a significant predictor of follow-up Sociotropy or Dependency.

⁶⁵ The data for this study was collected prior to this date.

Having determined that there was absolute change in Sociotropy and Dependency over the 12-month period, the relationship of these changes to recent life events was next investigated. Because Solitude, Independence and Self-criticism did not change over the 6- or 12-month time frame, the relationships between these variables and life events were not considered.

Relationships between Change in Personality and Life Events

Correlational Analysis

Change scores for Sociotropy and Dependency over the 12-month period (Time 1 to Time 3) were correlated with both self-report and interview-based measures of life events (NEQ and ELEI respectively), as well as depressed mood (BDI-II and HRSD total scores) and chronic stress (CSI total score).⁶⁶

Life event variables from the NEQ (self-report measure) represent “subjective appraisals”. That is, participants themselves rate their level of upset as a result of a particular life event. They make three ratings for each event that has occurred, namely the level of “general upset”, “interpersonal upset” and “achievement upset”.

Life event variables from the ELEI interview method included both subjective and objective appraisals of stress. Subjective ratings of stress included the participant’s ratings of the stressfulness of events, the “impact on relationships” and the “impact on achievement”. Objective ratings of the stressfulness of the event (methodology outlined in Chapter 8) were made by the research team and were based on the context in which events occurred, but without the research team knowing the participant’s emotional reaction to an event. The research team rated the “negative impact” or stress of each event on a 1–5 scale.

⁶⁶ The ELEI, HRSD and CSI (interview methods) were available to include in the analysis only for the remitted depressives group.

For both the NEQ and the ELEI, mean and maximum ratings were calculated. For example, mean general upset refers to the mean rating for “general upset” across all the life events a participant endorsed (i.e., the total score on general upset divided by the number of events).

Table 11.6. Interpersonal constructs. Correlations between personality change scores and life event variables over the 12-month period ($n = 41$)

		University Students		Remitted Depressives	
		Sociotropy Change Scores (T1–T3)	Dependency Change Scores (T1–T3)	Sociotropy Change Scores (T1–T3)	Dependency Change Scores (T1–T3)
NEQ (T1–T3)	Mean general upset	0.25	0.15	0.08	0.11
	Mean interpersonal upset	0.02	0.03	–0.26	–0.09
	Mean achievement upset	0.27	0.13	–0.20	0.05
	Max general upset	0.16	0.20	0.13	0.25
	Max interpersonal upset	–0.08	–0.01	–0.16	–0.02
	Max achievement upset	0.08	0.01	–0.19	0.17
ELEI (T1–T3)	Mean stress	N/A ⁶⁷	N/A	0.34	0.05
	Mean team rating of stress	N/A	N/A	0.31	0.34
	Mean impact on relationships	N/A	N/A	0.06	–0.19
	Mean impact on achievement	N/A	N/A	0.03	0.00
	Max stress	N/A	N/A	0.23	–0.13
	Max team rating of stress	N/A	N/A	0.28	0.46**
	Max impact on relationships	N/A	N/A	–0.04	–0.08
	Max impact on achievement	N/A	N/A	–0.09	–0.16
CSI (T1)		N/A	N/A	–0.09	0.09
BDI-II (T3)		–0.02	0.28	–0.18	–0.05
HRSD (T3)		N/A	N/A	0.12	0.25

Note.

NEQ = Negative Experiences Questionnaire; ELEI = Episodic Life Events Inventory; CSI = Chronic Stress Interview; BDI-II = Beck Depression Inventory, Second Edition; HRSD = Hamilton Rating Scale for Depression; Max = maximum; T1 = baseline; T3 = 12-month follow-up; N/A = not applicable. ** $p < 0.01$, one-tailed; * $p < 0.05$, one-tailed.

⁶⁷ As the ELEI and the CSI were not administered to the university students group, they were not applicable (N/A).

Calculating the mean value controls for differences across subjects in the number of life events endorsed, as discussed in Chapter 4 (Clark et al., 1992; Paykel, 1983). Calculating the maximum value identifies the event rated as most stressful. This is accordance with the research of Brown and Harris (1978) that one severe stressor is more important in predicting depression than a series of less severe life events.

As shown in Table 11.6, there were no significant correlations between change scores in Sociotropy and Dependency (Time 1 to Time 3) and self-reported life events scores (NEQ) for the university students or the remitted depressive participants.

For the remitted depressives group, there was a significant correlation between change in Dependency (Time 1 to Time 3) and the ELEI maximum team rating of stress (an objective measure of stress,⁶⁸ $r = 0.46, p < 0.05$). The correlation between change in Dependency (Time 1 to Time 3) and the mean team rating of stress neared significance ($r = 0.34, p = 0.09$, two-tailed),⁶⁹ When considering correlations between change in Sociotropy (Time 1 to Time 3) and objective measures of life event stress, the mean team rating of stress neared significance ($r = 0.34, p = 0.05$), and non-significant correlations were found between change in Sociotropy (Time 1 to Time 3) and the mean team rating of stress ($r = 0.31, p = 0.14$) and the maximum stress ($r = 0.23, p = 0.18$).

To summarise, the results demonstrated that relationships between Sociotropy and Dependency change scores (from Time 1 to Time 3) and life events were mostly non-significant. The one significant correlation was found in the remitted depressives group, between change in Dependency and the research team's objective rating of stress. However, it is also noted that some other relationships involving team ratings of stress neared significance. These trends are considered in more depth in the Discussion.

Multiple regression analysis (MRA) was used to investigate whether life events predicted a change in either Sociotropy or Dependency. As with the correlational analyses, Sociotropy and Dependency were used because they were the only variables in which significant change occurred over the intervals assessed (see Table 11.1).

⁶⁸ The university students were not administered the interview measure of life events (ELEI).

Predictors of Change

MRA was used to investigate the predictors of change in Dependency and Sociotropy between Time 1 and Time 3.

Change in Sociotropy

A number of standard regression analyses were performed⁷⁰. Change in Sociotropy from Time 1 to Time 3 was the dependent variable. Independent variables were Sociotropy at Time 1, depressed mood at Time 3 and life events. For the remitted depressives group, chronic stress was included as an independent variable and different regression equations were calculated for life events and depression as measured by self-report and interview. Life events for the whole 12-month period were considered.

University Students

Self-report Life Events Measure – NEQ. Change in Sociotropy from Time 1 to Time 3 was the dependent variable. Independent variables were Sociotropy (T1), BDI-II (T3) scores and life event variables from the NEQ. Each regression equation had a different life event variable: either mean or maximum general upset, interpersonal upset or achievement upset. Six regression equations were run.

The only predictor of change in Sociotropy at Time 3 was Sociotropy at Time 1. At no time did depressed mood (T3) or life events variables as measures by the NEQ predict change in Dependency scores at Time 3. A summary of these regression models can be seen in Appendix Y (Table A.1).

Interview Measure of Life Events – ELEI. The ELEI was not administered to the university students.

Remitted Depressives

Self-report Life Events Measure – (NEQ. A further number of standard MRAs were performed. Again, the dependent variable was change in Sociotropy from Time 1 to Time 3.

⁶⁹ The author acknowledges that this would have been significant if the correlational analysis was one-tailed. However, because the research was exploratory in nature, a two-tailed test was used.

⁷⁰ Regressions early in this chapter were replicating previous research, which used hierarchical regression (prescribing the order of entry for dependent variables). Here, as no order of entry was hypothesised, standard multiple regression was used.

Independent variables were Sociotropy (T1) along with chronic stress (T1), BDI-II (T3) and the life event variables from the NEQ (that occurred over the full 12-month period). Each regression equation had a different life event variable (mean or maximum general upset, interpersonal upset or achievement upset). Eight regression equations were run initially. None of these regression models was significant. A summary of these regression models can be seen in Appendix Y (Table A.2).

A further six regression equations were run, but this time with depressed mood as measured by the HRSD instead of the BDI-II. The only predictor of change in Sociotropy at Time 3 was Sociotropy at Time 1. A summary of the regression models can be seen in Appendix Y (Table A.3).

Interview Measure of Life Events – ELEI. A number of standard MRAs similar to those with self-reported life events were performed, but this time using life event measures from the interview method (ELEI). The life event variables used were mean and maximum ratings of: stress, impact on achievement, impact on relationships and team rating of stress. Eight regression equations were initially run with depressed mood as measured by the BDI-II (Appendix Y, Table A.4). A further eight regression equations were run, but this time with depressed mood measured using the HRSD (Appendix Y, Table A.5). None of the above regression models was significant.

Change in Dependency

University Students

Because no significant change in Dependency was found from Time 1 to Time 3 for the university students, no regression equations were computed for this group.

Remitted Depressives

Self-report Life Events Measure – NEQ. A number of standard MRAs were performed with change in Dependency from Time 1 to Time 3 as the dependent variable. Independent variables were Dependency (T1), chronic stress (T1), BDI-II (T3) and life event variables from the NEQ that occurred over the 12-month period. Each regression equation had a different life event variable, either mean or maximum general upset, interpersonal upset or achievement upset.

Six regression equations were initially run, with depressed mood measured using the BDI-II. The only significant predictor of change in Dependency from Time 1 to Time 3 was Dependency at Time 1. At no time did depressed mood at Time 1, chronic stress or life event variables significantly predict change in Dependency scores at Time 3. A summary of these regression models can be seen in Appendix Y (Table A.6).

A further six regression equations were run, but this time with depressed mood as measured by the HRSD. Although all six models were significant, the only predictor of change in Dependency at Time 3 was Dependency at Time 1 (Appendix Y, Table A.7).

Interview Measure of Life Events – ELEI. A number of similar regression analyses were performed, but this time with life events measured by interview. Again the dependent variable was change in Dependency from Time 1 to Time 3. The independent variables were Dependency (T1), chronic stress (T1), BDI-II (T1) and life event variables from the ELEI that occurred over the 12-month period. Separate regression equations were run for the different life event variables (mean or maximum ratings of: stress, impact on relationships, impact on achievement and team rating of stress). A summary of these regression models can be seen in Appendix Y (Table A.8). The only regression equation that was significant was when life events were measured by maximum team rating of stress (see next section, Maximum Team Rating of Stress).

A further eight regression equations were run, but this time with depressed mood as measured by the HRSD. Of these eight models, only two were significant. For these two models, the only significant predictor of change in Dependency from Time 1 to Time 3 was Dependency at Time 1. A summary of these regression models can be seen in Appendix Y (Table A.9).

Maximum Team Rating of Stress

The regression equation where the maximum team rating of stress significantly predicted change in Dependency can be seen in Table 11.7. This table displays the correlations between the variables, the unstandardised regression coefficients (B) and the intercept, the standardised regression coefficients (β), and R^2 and adjusted R^2 . The overall regression equation was significantly different from zero, $F(4, 16) = 4.28, p = 0.02$. Two independent variables contributed significantly to change in Dependency at Time 3: Dependency at Time

1 and the maximum team rating of stress. Altogether, 52% (40% adjusted) of the variability in change in Dependency at Time 3 was predicted by knowing scores on the independent variables.

Table 11.7. Remitted depressives. Regression model for change in Dependency from Time 1 to Time 3

Variables	Change in Dependency (T1–T3) (DV)	Dependency (T1)	Max Team Stress	CSI (T1)	BDI-II (T3)	B	β
Dependency (T1)	–0.51					–0.33	–0.54
Max-team- stress	0.46	0.04				5.94	0.47
CSI (T1)	0.09	0.02	0.13			0.48	0.17
BDI-II (T3)	–0.05	–0.06	0.05	0.61		–0.42	–0.21
Intercept =					11.29		
Means	–3.53	131.69	3.53	19.04	5.04		
Standard Deviations	10.10	16.74	0.80	3.64	5.16		
						$R^2 =$	0.52
						Adjusted $R^2 =$	0.40
						$R =$	0.72

Note.

Max-team-stress = Maximum team rating of stress; CSI = Chronic Stress Interview; BDI-II = Beck Depression Inventory, Second Edition.

Summary: Predictors of Change in Sociotropy and Dependency

At no time did life events predict change in Sociotropy at Time 3 for the university students group or the remitted depressives group. For the university students, the only predictor of change in Sociotropy from Time 1 to Time 3 was Sociotropy scores at Time 1. For the remitted depressives group, both self-report and interview measures of life events were used. For the self-report method of measuring life events, Sociotropy at Time 1 was the only predictor of change in Sociotropy from Time 1 to Time 3. For the interview method of measuring life events, none of the regression models was significant.

For the university students group, there was no significant change in Dependency from Time 1 to Time 3 (and thus no regression equations were calculated).

For the remitted depressives group, subjective ratings of life events, as measured by self-report checklist and interview, did not predict change in Dependency. However, change in

Dependency was predicted by the objective rating of the stressfulness of life events made by the research team, based on information gathered during the interview.

Although the analysis so far has used group means, it was thought to be useful to identify those participants who demonstrated the most change in Sociotropy and Dependency. The following supplementary analysis looks more closely at a smaller number of participants whose personality scores did change more substantially over the 1-year period.

Supplementary Analysis

Exploratory analysis was carried out to see if there were any characteristics that stood out about those participants who changed the most on either Sociotropy or Dependency over the 12-month period. Initially, participants whose Sociotropy or Dependency scores changed 5%⁷¹ or more over the 12-month period were identified. Then those participants whose Sociotropy or Dependency scores changed 10% or more⁷² were identified and examined more closely.

Participants Who Changed by at Least 5% on Sociotropy or Dependency

Characteristics of participants who changed by at least 5% on Sociotropy or Dependency (from Time 1 to Time 3) can be seen in Table 11.8. Forty-one university students and 41 remitted depressives remained in the study at Time 3. Of these participants, eight university students and 15 remitted depressives changed by more than 5% on Sociotropy from Time 1 to Time 3. Four university students and two remitted depressives changed by more than 5% on Dependency over this 12-month time period. It is interesting to note that fewer participants changed 5% or more on Dependency compared with Sociotropy. This is consistent with Blatt's theory (Blatt, 1974) of dependency and self-criticism being stable and enduring personality traits, as opposed to Beck and his colleagues who thought that there may be relatively more sociotropic schemas operating and vice versa, depending on the context (Clark et al., 1999).

⁷¹ A 5% change in Sociotropy = change in raw score on SAS-R Sociotropy of at least 8 points. A 5% change in Dependency = change in raw score on DEQ-McGill Dependency of at least 11 points.

⁷² A 10% change in Sociotropy = change in raw score on SAS-R Sociotropy of at least 15 points. A 10% change in Dependency = change in raw score on DEQ-McGill Dependency of at least 21 points.

Table 11.8. Characteristics of those participants with at least a 5% change on Sociotropy or Dependency from Time 1 to Time 3

	University Students		Remitted Depressives	
	Change in Sociotropy (> 5%)	Change in Dependency (> 5%)	Change in Sociotropy (> 5%)	Change in Dependency (> 5%)
<i>n</i>	8	4	15	2
Gender				
(% females:% males)	75:25	75:25	80:20	50:50
Age				
Mean (sd)	22.25 (2.38)	21.75 (2.06)	39.14 (6.80)	38.00 (9.90)
Range (years)	20–27	20–24	27–52	31–45
Ethnicity [%, (<i>n</i>)]				
Asian	0 (0)	0 (0)	0 (0)	50 (1)
Maori	0 (0)	0 (0)	0 (0)	0 (0)
Pacific Island	12.50 (1)	0 (0)	0 (0)	0 (0)
Pakeha	87.50 (7)	100 (4)	93.30 (10)	50 (1)
Other	16.70 (1)	0 (0)	6.7 (1)	0 (0)
Marital status [%, (<i>n</i>)]				
Married/defacto	37.50 (3)	25 (1)	73.30 (11)	0 (0)
Never married	62.50 (5)	75 (4)	26.70 (4)	0 (0)
Divorced	0(0)	0 (0)	0 (0)	100 (2)
Number of previous depressive episodes				
0	N/A	N/A	6.70 (1)	
1	N/A	N/A	6.70 (1)	0 (0)
2–4	N/A	N/A	46.70 (7)	0 (0)
more than 4	N/A	N/A	6.70 (1)	0 (0)
Number of suicide attempts				
0	N/A	N/A	53.30 (8)	50 (1)
1	N/A	N/A	20 (3)	50 (1)
2–4	N/A	N/A	15.40 (2)	0 (0)
more than 4	N/A	N/A	0.00	0 (0)

Note.

Missing data account for some percentages not adding up to 100%.

N/A = not applicable.

Comparison of Table 11.8 with the demographic characteristics of the whole sample (Table 9.2 and Figures 9.4 and 9.5) shows similar male to female ratios in this smaller group of participants. The university students with at least a 5% change on Sociotropy or Dependency were younger than the total group of university students at Time 1. Whereas, at Time 1, the age of the university students ranged from 20 to 65 years ($M = 31.53$), in this smaller group, the ages ranged from 20 to 27 years ($M = 22.25$; change on Sociotropy of at

least 5%) and from 20 to 24 years ($M = 21.75$; change on Dependency of at least 5%). This provides some evidence that it is the younger participants who were more susceptible to greater change on the interpersonal personality constructs compared with their older counterparts. Fewer of the university students who changed by at least 5% were married compared with the whole university students group. It may be that single students are more concerned about interpersonal issues, and more vulnerable to change on this personality dimension, than those who are in more permanent relationships.

Looking at the marital status of the remitted depressives group shows that, of those who changed by more than 5% on Sociotropy, 73.30% were married (compared with 65.6% of the total remitted depressives group). There were only two remitted depressive participants who changed on Dependency by more than 5%, and neither of these participants was married.

Ethnicity was much the same for both this smaller group of participants and the wider sample, with a predominance of Pakeha participants. In terms of number of previous depressive episodes, for both the larger sample as a whole (Figure 9.5) and this smaller group who changed on Sociotropy or Dependency by at least 5%, the largest percentage had had between two and four previous depressive episodes. Again, when looking at the whole sample at Time 1 and this smaller group, the pattern of previous suicide attempts was similar. The majority of remitted depressives had had no previous suicide attempts.

Correlational Analysis

For this smaller group of participants, Sociotropy (Time 3) and Dependency (Time 3) as well as change on Sociotropy (Time 1 to Time 3) and change on Dependency (Time 1 to Time 3) were correlated with depressed mood (Time 3), change in depressed mood (Time 1 to Time 3) as well as age and marital status. For the remitted depressives group, correlations with chronic stress (Time 1), number of children, number of prior suicide attempts and number of prior depressive episodes were also conducted.

University Students. As seen in Table 11.9, Sociotropy scores at Time 3 were significantly correlated with BDI-II scores at Time 3 ($r = 0.81$). No other significant correlations were found, although a number of moderately strong, though non-significant, correlations can be seen. These are worth noting, particularly given the low power as a result of the sample size.

Remitted Depressives. For the remitted depressives group, there were no significant correlations between Sociotropy at Time 3 or change in Sociotropy from Time 1 to Time 3 and the other variables (see Table 11.9). Although not significant, moderately strong correlations were found between Sociotropy (Time 1), and BDI-II scores (Time 3), marital status and number of depressive episodes. Also moderate to strong though non-significant correlations were found between change on Sociotropy from Time 1 to Time 3, and BDI-II scores at Time 3, chronic stress, sex and marital status.

Again, although these were not significant, they are worth noting given the low power as a result of the sample size. It was not possible to compute correlations for Dependency and change on Dependency as the number in this group ($n = 2$) was too small.

Table 11.9. Correlational analysis for participants with a change on Sociotropy or Dependency of at least 5%

	University Students				Remitted Depressives			
	Sociotropy (T3) (<i>n</i> = 8)	Change in Sociotropy (T1–T3) (<i>n</i> = 8)	Dependency (T3) (<i>n</i> = 4)	Change in Dependency (T1–T3) (<i>n</i> = 4)	Sociotropy (T3) (<i>n</i> = 15)	Change in Sociotropy (T1–T3) (<i>n</i> = 15)	Dependency (T3) (<i>n</i> = 2) ⁷³	Change in Dependency (T1–T3) (<i>n</i> = 2) ⁷³
BDI-II (T3)	0.81*	–0.03	0.37	0.39	–0.24	–0.45	N/A	N/A
chBDI-II (T1–T3)	0.38	0.47	0.13	0.74	0.15	–0.02	N/A	N/A
HRSD score (T1)	N/A	N/A	N/A	N/A	0.02	–0.19	N/A	N/A
chHRSD (T1–T3)	N/A	N/A	N/A	N/A	0.09	–0.14	N/A	N/A
CSI (T1)	N/A	N/A	N/A	N/A	0.05	–0.20	N/A	N/A
Age	–0.32	0.00	0.30	–0.62	0.16	0.07	N/A	N/A
Sex	0.32	–0.20	0.18	0.92	–0.12	0.27	N/A	N/A
Marital status	0.20	0.47	–0.18	0.92	–0.30	–0.30	N/A	N/A
Number children	N/A	N/A	N/A	N/A	–0.03	–0.03	N/A	N/A
Number depressive episodes	N/A	N/A	N/A	N/A	0.20	0.20	N/A	N/A

Note.

BDI-II = Beck Depression Inventory, Second Edition; chBDI-II = Change in BDI-II scores; HRSD = Hamilton Rating Scale for Depression; chHRSD = change in HRSD; CSI = Chronic Stress Interview. T1 = Time 1; T3 = Time 3. N/A = not applicable.

⁷³ Could not do correlational analysis because the sample size (*n* = 2) was too small.

Participants Who Changed by at Least 10% on Sociotropy or Dependency

University Students

Two of the university students demonstrated a change score of more than 10% on Sociotropy. For both of these participants, their score on Sociotropy decreased by at least 10%. None of the university students changed by at least 10% on Dependency. Demographic characteristics of these participants can be seen in Table 11.10.

Remitted Depressives

Two of the remitted depressives group demonstrated a change score of more than 10% on Sociotropy. For both these participants, their score on Sociotropy decreased. Demographic characteristics of these participants can be seen in Table 11.10. None of the remitted depressives group demonstrated a change score of more than 10% on Dependency.

Qualitative Look at Those Participants Who Changed by at Least 10% on Sociotropy

Two university students and two remitted depressives demonstrated a reduction on Sociotropy of at least 10%. Table 11.11 lists the life events that they endorsed as experiencing over the 12-month period (i.e., between Time 1 and Time 3).

The number of negative life events experienced by these participants over the course of the year ranged from 2 to 14, and varied considerably. When looking for common experiences, it was noticed that three out of the four participants experienced the onset or worsening of a serious physical disability, and the fourth experienced the onset or worsening of a serious illness in a family member. Two out of the four participants developed a close friendship and two out of four moved residence.

Table 11.10. Characteristics of those participants with at least a 10% change on Sociotropy or Dependency from Time 1 to Time 3

	University Students		Remitted Depressives	
	Sociotropy	Dependency	Sociotropy	Dependency
<i>n</i>	2	0	2	0
Gender				
(% females:% males)	50:50	N/A	100: 0.00	N/A
Age				
Mean (sd)	22 (2.83)	N/A	39.50 (4.95)	
Range (years)	20–24		36–43	
Ethnicity [% , (n)]				
Asian	0 (0)	N/A	0 (0)	N/A
Maori	0 (0)		0 (0)	
Pacific Island	0 (0)		0 (0)	
Pakeha	100 (2)		100 (2)	
Other	0 (0)		0 (0)	
Marital status [% , (n)]				
Married/defacto	0 (0)	N/A	100 (2)	N/A
Never married	50 (1)		0 (0)	
Divorced	50 (1)		0 (0)	
Number of children [% , (n)]	N/A	N/A		N/A
0			0 (0)	
1–2			100 (2)	
3 or more			0 (0)	
Number of suicide attempts	N/A	N/A		N/A
0			0 (0)	
1			50 (1)	
2–3			0 (0)	
4 or more				
No of depressive episodes	N/A	N/A		N/A
1			0 (0)	
2–3			50 (1)	
4 or more			0 (0)	

Note.

Missing data account for some percentages not adding up to 100%.

N/A = not applicable.

Table 11.11. Life events endorsed by those participants who changed by at least 10% on Sociotropy (n = 4)

Life Event (NEQ and ELEI)	University Students (n = 2)		Remitted Depressives (n = 2)	
	Participant 1	Participant 2	Participant 1	Participant 2
<i>Involved in physical fight</i>	Yes			
<i>Serious argument with co-worker or boss</i>		Yes		
<i>Changed course or training programme</i>		Yes		
<i>Graduated from course or training programme</i>		Yes		
<i>Started a new course or training programme</i>				Yes
<i>Did not get expected promotion</i>		Yes		
<i>Increase in job responsibility</i>		Yes		
<i>Onset or worsening of serious physical disability</i>		Yes	Yes	Yes
<i>Onset or worsening of serious illness in family member</i>	Yes			
<i>Spouse or partner stopped work</i>		Yes		
<i>Serious argument with spouse or partner</i>		Yes		
<i>Family member died</i>		Yes		
<i>Family member made unsuccessful suicide attempt</i>		Yes		
<i>Child had termination of pregnancy</i>				Yes
<i>Onset or worsening of behaviour problems in children</i>			Yes	
<i>Onset or worsening of serious illness in child</i>			Yes	
<i>Close friend died</i>				Yes
<i>Developed a close friendship</i>			Yes	Yes
<i>Close friend moved away</i>		Yes		
<i>Did not get expected wage or salary increase</i>		Yes		
<i>Involved in a physical fight</i>		Yes		
<i>Moved to a new residence</i>		Yes		Yes
<i>Built a home or had one built</i>				Yes
<i>Major financial difficulties</i>				Yes

Note.

NEQ = Negative Experiences Questionnaire; ELEI = Episodic Life Events Inventory.

Qualitative Look at Those Participants Who Changed the Most on Dependency

There were no participants who changed by at least 10% on Dependency. For this reason, the participants who changed the most on Dependency were looked at qualitatively.

University Students. The participant who changed the most on Dependency from the university students group had a reduction in Dependency of 9.52%. Because this participant also changed on Sociotropy by at least 10%, they were also identified in Table 11.11 (Participant #2). The participant with the next biggest change on Dependency reduced their score by 6.71%. Table 11.12 lists the life events that these participants endorsed as experiencing in the 12-month period (i.e., between Time 1 and Time 3). These two participants experienced 14 and seven negative life events respectively. When looking at the life events experienced, Participant #1 had several life events that, according to Clark et al.'s (1992) taxonomy would be considered interpersonal. These include "had a serious argument with spouse or partner", "family member died", "family member made unsuccessful suicide attempt" and "close friend moved away". Participant #2 also experienced several predetermined interpersonal life events. These were "broke up with steady boyfriend", "serious argument with family member" and "close friend moved away". However the above interpersonal life events would be expected to result in an increase of Dependency rather than a decrease as was found.

Remitted Depressives. The participant who changed the most on Dependency from the remitted depressives group changed by 5.60%. The life events experienced by this participant in the 12-month period (i.e., between Time 1 and Time 3) can be seen in Table 11.12. This participant experienced eight life events including "a serious argument with spouse or partner", "trying to have a baby", "becoming pregnant", "partner having a court appearance" and "serious argument with co-worker or boss". Again, these life events would theoretically be associated with an increase rather than a decrease in Dependency.

Table 11.12. Life events endorsed by those participants who changed the most on Dependency

Life Event (NEQ and ELEI)	University Students (<i>n</i> = 2)		Remitted Depressives (<i>n</i> = 1)
	Participant 1 (9.52% reduction in Dependency)	Participant 2 (6.71% reduction in Dependency)	Participant 1 (5.60% reduction in Dependency)
Quit job		Yes	
Serious argument with co-worker or boss	Yes		Yes
Started new business			Yes
Did not get expected wage/salary increase			
Started new course/training programme		Yes	
Changed course or training programme	Yes		
Graduated from course or training programme	Yes		
Did not get expected promotion	Yes		
Increase in job responsibility	Yes		
Onset or worsening of physical disability	Yes		
Trying to have a baby			Yes
Broke up with steady boyfriend/girlfriend		Yes	
Serious argument with spouse/partner	Yes		Yes
Spouse/partner stopped work	Yes		
Family member died	Yes		
Serious argument with family member		Yes	
Family member made unsuccessful suicide attempt	Yes		
Broke up with close friend		Yes	
Close friend moved away	Yes		
Did not get expected wage or salary increase	Yes		
Involved in physical fight	Yes		
Moved to new residence	Yes	Yes	
Developed a close friendship		Yes	
Not getting expected results in PhD			
Suspended PhD			Yes
Serious physical illness requiring medical treatment			Yes
Became pregnant			Yes
Partner had a court appearance			Yes

Note. NEQ = Negative Experiences Questionnaire; ELEI = Episodic Life Events Inventory.

Discussion

Previous longitudinal research, which has largely supported the stability of personality constructs, has tended to use relatively short time frames, often 12–16 weeks (e.g., Moore & Blackburn, 1996; Zuroff et al., 1999, 1983) and, in some cases, as short as 5 weeks (Santor et al., 1997a). The results of the current research suggest that longer time frames are needed for changes in personality factors to be observed.

In the current longitudinal study, a significant decrease on sociotropy for the university students and a significant decrease on sociotropy and dependency for the remitted depressives group occurred somewhere between 6 and 12 months from the beginning of the study. These effect sizes were moderate to large. Although the results of previous studies have been mixed, sociotropy and dependency have been shown to change more than autonomy, which has tended to be largely stable over time (Fairbrother & Moretti, 1998; Moore & Blackburn, 1996).

As well as investigating the absolute stability of Beck's and Blatt's constructs, measured by significant mean changes over time, the relative stability of these constructs was also examined. Although demonstrating absolute change, sociotropy and dependency were shown to be relatively stable, evidenced by strong and significant test-retest correlation coefficients (ranging from 0.65 to 0.85) from Time 1 to Time 3. Hence, these results demonstrated significant absolute change on interpersonal variables (a significant reduction in mean scores) and yet relative stability as measured by test-retest correlations. This is consistent with the research of Zuroff et al. (1999), which also demonstrated that it is possible for a group to show large, significant changes in mean scores on DAS subscales in the presence of "perfect stability in the participants' relative standing on the trait" (p. 84). Obviously, these findings do not fit with a pure trait-dependent model, which would predict high levels of both absolute and relative stability (Zuroff et al., 1999). Nor does it fit with a pure state-dependent model, which would require significant changes on measures of absolute stability and small non-significant test-retest coefficients (i.e., lack of relative stability). Rather, the current findings fit with the state-trait vulnerability model of Zuroff et al. (1999), which predicts that dysfunctional attitudes can be to some extent state-dependent and also relatively stable. To account for this, Zuroff et al. (1999) suggest that there are "persistent individual differences in the availability of cognitive structures ... (and)

continual fluctuations take place within individuals in the accessibility⁷⁴ of these structures” (p. 77). Although the study of Zuroff et al. (1999) examined the stability of dysfunctional attitudes (as measured by the DAS), the current findings support this model for measures of cognitive personality, in particular the interpersonal constructs of sociotropy and dependency. As discussed earlier in the chapter, this pattern of results would be expected if there was a significant life event that affected everybody in the sample. However, this is unlikely. An alternative explanation to that of Zuroff et al. (1999) to account for both absolute change and relative stability could be the statistical artefact of regression to the mean. Regression⁷⁵ to the mean is a technical term in probability and statistics referring to the fact that, left to themselves (i.e., with no intervention), things tend to return to normal (Barnett, van der Pols, & Dobson, 2005). The results of the current study showed that, over time (as opposed to treatment), dependency and sociotropy scores decreased. However, other possibilities certainly exist including testing for predictors of absolute change.

This discussion now turns to the predictors of any absolute change in personality. As discussed, the current study demonstrated a significant absolute change in sociotropy for both the university students and the remitted depressives and a significant change in dependency for the remitted depressives group over the 12-month period. None of the life events variables predicted change on sociotropy for either the university students group or the remitted depressives group. Similarly, for the remitted depressives group, subjective ratings of life events measured by self-report checklist and interview did not predict change in dependency. However, change in dependency was predicted by objective ratings of stress made by the research team, based on information gathered during the interview. The alternative method of asking people “how stressful was this event”, called subjective ratings of stress, is controversial. One concern of this approach, as discussed in Chapter 4, is that of “effort after meaning” (Brown & Harris, 1989; Dohrenwend et al., 1987). An example of this would be when a person might rate an event as more stressful if they subsequently become depressed. Effort after meaning usually results in an over-reporting of negative life events (Katschnig, 1986). Estimating the amount of stress more objectively through the use of contextual judgements of threat

⁷⁴ The accessibility of cognitive structures is affected by mood, social context and biological processes, as discussed in Chapter 3.

⁷⁵ The statistical term “regression” comes from a Latin root meaning “going back”, and was first used by Francis Galton (1886) in his paper *Regression towards Mediocrity in Hereditary Stature*.

is widely accepted as an improvement in the quantification of life stress (e.g., Hammen et al., 1985; Monroe & Roberts, 1990). This study adds support to the argument that these two methods of measuring life stress do produce quite different results.

Supplementary analysis revealed that more participants (both university students and remitted depressives) changed on sociotropy compared with dependency over the 12-month period of the study. This is consistent with Blatt's and Beck's theories, outlined in Chapter 2, although no previous study has yet investigated and compared the stability of Beck's and Blatt's constructs in the same study. Although sociotropy and dependency have been used interchangeably in the research (Coyne & Whiffen, 1995), there is a crucial difference, in that Blatt (1974) emphasised that dependency (and self-criticism) is an independent and enduring personality trait. Although Beck also advocates for the stability of sociotropy and autonomy, he suggests that sociotropic and autonomous constructs may be "latent" and "inaccessible" when an individual is not depressed (Clark et al., 1999, p. 262).

Examination of life events for this smaller group of participants who changed the most on sociotropy and dependency showed that three out of the four people who changed on sociotropy had experienced the "onset or worsening of a serious physical disability", and the fourth experienced this in a family member. One of the participants had a relatively large number of life events ($n = 14$). The other three participants had between two and eight life events. No participants changed by more than 10% on dependency. The participant who changed the most on dependency had experienced 11 stressful life events in the preceding 6 months. This was the same participant who had been identified earlier as changing by more than 10% on sociotropy. Of these 11 life events, there were some that would potentially require long-term adjustment and involve loss. These were "family member died", "family member made unsuccessful suicide attempt" and "onset or worsening of serious physical disability". Hence, it may not have been a case of 11 minor life hassles adding up, but one or two key events as being most significant. Although, this cannot be teased out from what we know in the current study based on self-report, death and suicide attempts would certainly qualify as major life events.

The question of whether sociotropy/dependency and autonomy/self-criticism are stable trait-like features of personality or whether they are affected by stressful life circumstances or context (Question 2) is an important one, when considering the congruency hypothesis. Integral to the congruency hypothesis is the idea that personality (sociotropy/dependency or autonomy/self-criticism) interacts with life events and results in depression. For this to occur, personality must be conceptualised as a stable trait. Based on the current findings, both the supplementary findings together with the previous findings in this study, it appears that mean changes in sociotropy and dependency but not autonomy and self-criticism do occur over time, but that time periods of more than 6 months are needed for this change to be evident. However, supplementary analysis demonstrated that most people do not change a significant amount and it is only a small number of people who do change. Future research would benefit from investigating further this small percentage of people who do change on personality variables.

Coyne and Whiffen (1995) have suggested that social environments such as marriage to an undependable mate may contribute to the stability of behaviour and thereby *mimic* the effects of an enduring personality trait. However, they argue that, if a person is able to remove themselves from such a relationship, their personality may appear to be quite different. Drawing on feminist perspectives, Coyne and Whiffen provide an alternative interpretation of the relationship of sociotropy/dependency, and autonomy/self-criticism to depression. The view of Coyne and Whiffen rivals the view that these are stable diatheses or vulnerabilities to depression. They suggest that, instead of sociotropy/dependency reflecting a women's excessive need for acceptance, understanding, support and guidance, it represents a cultural pattern of men being unresponsive, emotionally detached and otherwise acting in ways that stimulate women's anxiety about male partners' availability and the security of their attachments. Future research from this and other perspectives could look at possible sources of elevated sociotropy or dependency scores in participants' current experiences.

CHAPTER 12: CLASSIFICATION OF LIFE EVENTS: RESULTS AND DISCUSSION

Introduction

At the core of the congruency hypothesis (Beck, 1983, 1987) is the notion that an individual is most likely to become depressed following negative life events that are “congruent” with their personality style.⁷⁶ Inherent in this theory is the idea that both personality and life events can be classified in terms of their level of interpersonal (sociotropic/dependent) or achievement-oriented (autonomous/self-critical) orientation (e.g., Beck, 1983, 1987; Clark et al., 1992; Hammen et al., 1985, 1989a, 1989b; Robins & Block, 1988; Robins, 1990, Study 1; Rude & Burnham, 1993; Zuroff & Mongrain, 1987). The measurement of interpersonal and achievement-related personality styles was discussed in Chapter 2. This chapter addresses the classification of life events. Life events are most often classified as interpersonal or achievement based according to researchers agreed upon predetermined classifications (as discussed in Chapter 5). This chapter investigates the validity of this procedure and the underlying assumption that life events can be clearly classified a priori as sociotropic or autonomous.

Question 3. Classification of Life Events

Can life events be classified as either sociotropic or autonomous, or are they perceived as either sociotropic or autonomous as a function of personality?

Clark et al. (1992) developed the Negative Experiences Questionnaire (NEQ) to measure life events. This measure specifically focused on negative life events because of the importance of negative events in the onset and recurrence of depression. Clark et al. also specifically stated that they chose items with a clear sociotropic or autonomous orientation. The negative life events in the study of Clark et al. were classified as sociotropic or autonomous based on the ratings of three judges, “all experienced researchers in the area of cognitive vulnerability” (Clark, et.al, 1992, p. 641; see Appendix P). As discussed earlier, of the 104 negative life events, judges unanimously categorised 44 as sociotropic and 46 as autonomous. The remaining 14 items were considered to be ambiguous and were therefore excluded from the analysis.

⁷⁶ Personality style is conceptualised in terms of sociotropy-autonomy or dependency-self-criticism.

If events are inherently sociotropic (interpersonal) or autonomous (achievement based), in line with predetermined taxonomies such as that developed by Clark et al. (1992), then correlations between a person's rating of the impact of an event on their relationships and the impact of an event on their sense of achievement would be expected to be low. To begin to investigate this assumption that predetermined sociotropic events would have a more interpersonal impact than an achievement impact and conversely that predetermined autonomous events would have a more achievement-oriented impact than an interpersonal impact, a number of bivariate correlations were calculated. A clear differentiation between interpersonal and achievement impact of events would be reflected by low correlations between participants' ratings of interpersonal impact and achievement impact of life events (for sociotropic and autonomous events, respectively).

The second part of the investigation then examined correlations between the interpersonal impact of sociotropic events and the interpersonal impact of autonomous events. Again, if events are inherently sociotropic or autonomous, low and nonsignificant correlations would be expected between the interpersonal impact of sociotropic events and the interpersonal impact of autonomous events. Conversely, low and insignificant correlations would be expected between the achievement impact of sociotropic events and the achievement impact of autonomous events. All the sets of correlations can be seen in Tables 12.1–12.3, for the various samples and life events measures.

Correlational Analysis

To investigate whether participants differentiated between the impact that a life event had on their relationships and the impact that a life event had on their sense of achievement, a number of correlations between the life event variables were computed. Life events were classified as either sociotropic or autonomous based on the taxonomy of Clark (personal communication, 2001). Time 1 data were used, because there were more participants at the beginning of the study ($n = 61$). Mean and maximum ratings of interpersonal and achievement upset or impact are displayed on each table separately.

University Students

Self-reported Life Events – NEQ

For events classified a priori as sociotropic and autonomous respectively, correlations between interpersonal upset and achievement upset⁷⁷ were calculated (shown in Table 12.1, see shaded cells).

Table 12.1. Correlations between mean and maximum interpersonal upset and achievement upset from the NEQ at Time 1 (university students, $n = 61$)

	Sociotropic Events		Autonomous Events	
	Mean Interpersonal Upset	Mean Achievement Upset	Mean Interpersonal Upset	Mean Achievement Upset
Sociotropic events				
Mean interpersonal upset	1.00	0.64**	0.36**	–
Mean achievement upset		1.00	–	0.46**
Autonomous events				
Mean interpersonal upset			1.00	0.48**
Mean achievement upset				1.00
	Maximum Interpersonal Upset	Maximum Achievement Upset	Maximum Interpersonal Upset	Maximum Achievement Upset
Sociotropic events				
Maximum interpersonal upset	1.00	0.64**	0.25	–
Maximum achievement upset		1.00	–	0.28
Autonomous events				
Maximum interpersonal upset			1.00	0.37**
Maximum achievement upset				1.00

Note.

* $p < 0.05$; ** $p < 0.01$, one-tailed.

Correlations ranged from $r = 0.37$ to $r = 0.64$ and all were significant ($p < 0.01$).

Overall, the fact that correlations between interpersonal upset and achievement upset were all moderately strong and significant would indicate that university students were not uniquely differentiating between the impact that an event had on their relationships

⁷⁷ Interpersonal upset refers to how much the event resulted in “a loss of closeness, acceptance or support from others”. Achievement upset refers to how much the event resulted in “a loss of your independence, freedom or goals”.

and the impact that an event had on their sense of achievement. That is, they were not consistently assigning an event as impacting predominantly on *either* interpersonal relationships *or* sense of achievement.

Examination of correlations between interpersonal upset for sociotropic events and interpersonal upset for autonomous events can also be seen in Table 12.1 (unshaded cells). For *mean* interpersonal upset and achievement upset, these correlations were moderately strong and significant ($p < 0.01$). This indicates that the university students were not clearly differentiating between the interpersonal upset of sociotropic events and the interpersonal upset of autonomous events. A clear differentiation would be expected to result in higher ratings of interpersonal upset on sociotropic events than on autonomous events and therefore low and nonsignificant correlations between these two ratings.

For *maximum* interpersonal upset and achievement upset (shown in the bottom half of Table 12.1), the correlations were nonsignificant. This indicates some differentiation in the ratings of university students' of the interpersonal and achievement-based impact of life events. It may be that this differentiation is more easily made for maximum versus mean ratings of event impact because maximum interpersonal upset and achievement-based upset may reflect events that are more clearly (less ambiguously) sociotropic or autonomous.

Remitted Depressives

Self-reported Life Events – NEQ

For events classified a priori as sociotropic and autonomous respectively, correlations between interpersonal upset and achievement upset⁷⁸ can be seen in Table 12.2 (see shaded cells). All correlations were significant ($p < 0.01$).

Again, there were moderate to strong and significant correlations between interpersonal upset and achievement upset, ranging from $r = 0.37$ (correlation between maximum interpersonal upset and maximum achievement upset for autonomous events) to $r = 0.64$

⁷⁸ Interpersonal upset refers to how much the event resulted in "a loss of closeness, acceptance or support from others". Achievement upset refers to how much the event resulted in "a loss of your independence, freedom or goals".

(correlation between maximum interpersonal upset and maximum achievement upset for sociotropic events). As with the university students group, moderately strong and significant correlations again suggest that the participants did not consistently differentiate between the impact that negative life events had on them interpersonally and the impact that negative life events had on their sense of achievement.

Correlations between interpersonal upset for sociotropic events and interpersonal upset for autonomous events can also be seen in Table 12.2 (unshaded cells) as well as correlations between achievement upset for sociotropic events and achievement upset for autonomous events. Again, similar to the university students group, correlations for maximum interpersonal upset and achievement upset were nonsignificant.

Table 12.2. Correlations between mean and maximum interpersonal upset and achievement upset from the NEQ at Time 1 (remitted depressives, $n = 61$)

	Sociotropic Events		Autonomous Events	
	Mean Interpersonal Upset	Mean Achievement Upset	Mean Interpersonal Upset	Mean Achievement Upset
Sociotropic events				
Mean interpersonal upset	1.00	0.55**	0.19	–
Mean achievement upset		1.00	–	0.30**
Autonomous events				
Mean interpersonal upset			1.00	0.61**
Mean achievement upset				1.00
	Maximum Interpersonal Upset	Maximum Achievement Upset	Maximum Interpersonal Upset	Maximum Achievement Upset
Sociotropic events				
Maximum interpersonal upset	1.00	0.64**	0.04	–
Maximum achievement upset		1.00	–	0.27
Autonomous events				
Maximum interpersonal upset			1.00	0.37**
Maximum achievement upset				1.00

Note.

* $p < 0.05$; ** $p < 0.01$, one-tailed.

This indicates some differentiation between the impact that an event had on them interpersonally and the impact that an event had on their sense of achievement. In addition (and different from the university students group), one of the correlations for *mean* impact (between mean interpersonal upset for sociotropic events and mean interpersonal upset for autonomous events) was nonsignificant.

Interview Measure for Life Events – ELEI

Correlations between impact on relationships and impact on achievement⁷⁹ from the ELEI for events classified a priori as sociotropic or autonomous can be seen in Table 12.3 (see shaded cells).

Table 12.3. Correlations between mean and maximum impact on relationships and impact on achievement from the ELEI at Time 1 (remitted depressives, $n = 61$)

	Sociotropic Events		Autonomous Events	
	Mean Impact on Relationships	Mean Impact on Achievements	Mean Impact on Relationships	Mean Impact on Achievements
Sociotropic events				
Mean impact on relationships	1.00	0.42**	0.61**	-
Mean impact on achievements		1.00	-	0.53**
Autonomous events				
Mean impact on relationships			1.00	0.56**
Mean impact on achievements				1.00
	Maximum Impact on Relationships	Maximum Impact on Achievements	Maximum Impact on Relationships	Maximum Impact on Achievements
Sociotropic events				
Maximum impact on relationships	1.00	0.46**	0.48*	-
Maximum impact on achievements		1.00	-	0.46*
Autonomous events				
Maximum impact on relationships			1.00	0.72**
Maximum impact on achievements				1.00

Note.

* $p < 0.05$; ** $p < 0.01$, one-tailed.

⁷⁹ Whereas NEQ variables are termed “interpersonal upset” and “achievement upset”, the related ELEI variables are termed “impact on relationships” and “impact on achievement”.

Correlations ranged from 0.42 to 0.72 and all were significant ($p < 0.01$). Again this indicates that the remitted depressives were not clearly differentiating between the interpersonal impact and the achievement impact of life events.

Examination of correlations between impact on relationships for sociotropic events and autonomous events can also be seen in Table 12.3 (unshaded cells). These correlations were all moderately strong and significant ($p < 0.01$). Similarly, correlations between impact on achievement for sociotropic events and autonomous events (unshaded cells) were moderately strong and significant. This would indicate that remitted depressives were not clearly differentiating between the interpersonal impact and the achievement impact of events.

Summary of Correlational Analysis

The question of whether participants could differentiate between the impact that an event has on their relationships and the impact that an event has on their sense of achievement was investigated through two sets of correlations. First, correlations between interpersonal upset and achievement upset for sociotropic and autonomous events respectively were calculated. Second, correlations between interpersonal upset for sociotropic events and autonomous events and correlations between achievement upset for sociotropic events and autonomous events were calculated.

Clear support that participants could differentiate between the impact that an event had on their relationships and the impact that an event had on their sense of achievement was not found. Overall, moderate to strong and significant correlations were consistently found between participants' ratings of interpersonal impact and achievement impact. This was the case for events classified a priori as sociotropic, for events classified a priori as autonomous, for university students and for remitted depressives. This pattern was seen on both self-report and interview measures of life events. If events were clearly sociotropic or autonomous, then non-significant correlations between participants' ratings of interpersonal upset and achievement upset would have been expected.

Examination of additional correlations, this time looking at interpersonal upset for sociotropic events versus autonomous events, and then achievement upset for sociotropic events versus autonomous events (Tables 12.1–12.3) produced varied results. When looking at *mean* ratings of interpersonal upset and achievement upset, the majority of correlations (five out of six) across samples and life event measures were moderately strong and significant. This, again, indicates that participants were not differentiating between the impact that an event had on them interpersonally and achievement wise. However, when *maximum* ratings of life event impact were used, four out of six of the correlations were non-significant. This indicated that, when considering only those events more strongly classified as sociotropic or autonomous, more differentiation between interpersonal upset and achievement upset was found.

Correlations between Personality and Sociotropic or Autonomous Life Event Variables

The alternative hypothesis to life events being inherently sociotropic or autonomous is the idea that individuals may experience the same event differently, depending on their personality style. The idea here is that individuals would construe life events across diverse domains more in terms of their own specific sociotropic or autonomous vulnerability.

To partially test this alternative hypothesis, correlations between personality factors (Sociotropy, Dependency, Solitude, Independence and Self-criticism) and interpersonal and achievement life event variables from the NEQ and the ELEI were calculated. To support the hypothesis that individuals would experience a variety of events (both sociotropic and autonomous) in line with their own sociotropic/dependent or autonomous/self-critical personality style, significant positive correlations between Sociotropy/Dependency and interpersonal upset would be expected. Conversely, significant positive correlations between Autonomy⁸⁰/Self-criticism and achievement upset would be expected.

⁸⁰ Again, Autonomy was operationalised into two subfactors, namely Solitude and Independence, in accordance with the SAS-R.

Interpersonal Constructs (SAS-R Sociotropy and DEQ-McGill Dependency)

To test the hypothesis that sociotropic or dependent individuals would experience a variety of events (both sociotropic and autonomous) as affecting their interpersonal relationships, correlation coefficients were calculated between Sociotropy and Dependency, and interpersonal and achievement-oriented variables from the NEQ and ELEI. The results are summarised in Table 12.4.

University Students

As can be seen in Table 12.4, Sociotropy was not significantly correlated with ratings of interpersonal upset or achievement upset. Dependency was significantly negatively correlated with mean interpersonal upset ($r = -0.35, p < 0.01$) and maximum interpersonal upset ($r = -0.26, p < 0.05$).

Table 12.4. Interpersonal constructs. Correlations between SAS-R Sociotropy and DEQ-McGill Dependency and life event variables at Time 1 ($n = 61$)

	University Students		Remitted Depressives	
	Sociotropy	Dependency	Sociotropy	Dependency
Mean impact				
Mean interpersonal upset (NEQ)	-0.21	-0.35**	0.17	0.04
Mean impact on relationships (ELEI)	N/A	N/A	-0.05	0.09
Mean achievement upset (NEQ)	-0.13	-0.21	0.15	0.09
Mean impact on achievement (ELEI)	N/A	N/A	0.05	0.09
Maximum impact				
Maximum interpersonal upset (NEQ)	-0.14	-0.26*	0.18	0.15
Maximum impact on relationships (ELEI)	N/A	N/A	-0.07	0.00
Maximum achievement upset (NEQ)	0.02	0.01	0.15	0.15
Maximum impact on achievement (ELEI)	N/A	N/A	0.12	0.12

Note.

NEQ = Negative Experiences Questionnaire; ELEI = Episodic Life Events Inventory; SAS-R = Sociotropy and Autonomy Scale, Revised; DEQ-McGill = Depressive Experiences Questionnaire, McGill Revision.

* $p < 0.05$; ** $p < 0.01$, two tailed.

N/A: As the ELEI was not administered to the university students group, no correlations could be calculated.

Remitted Depressives

Sociotropy and Dependency were not significantly correlated with any of the ratings of interpersonal upset or achievement upset (see Table 12.4).

Achievement Constructs (Independence, Solitude and Self-criticism)

To test the hypothesis that self-critical or autonomous individuals would experience a variety of events (both sociotropic and autonomous) as affecting their sense of achievement, correlation coefficients were calculated between the autonomous personality variables (Self-criticism, Solitude and Independence) and interpersonal and achievement-related upset/impact from the NEQ and the ELEI (the results are summarised in Table 12.5).

University Students

A significant correlation was found between Self-criticism and maximum interpersonal upset ($r = 0.31, p < 0.05$). No significant correlations were found between Solitude or Independence and any of the ratings of interpersonal upset or achievement upset.

Remitted Depressives

No significant correlations were found between Self-criticism or Solitude and ratings of interpersonal upset or achievement upset. Independence was significantly negatively correlated with mean impact on relationships ($r = -0.43, p < 0.01$) and maximum impact on relationships ($r = -0.36, p < 0.01$).

Overall, strong support for the hypothesis that participants would rate a variety of life events (both sociotropic and autonomous) in line with their own interpersonal or achievement-oriented personality style was not found through this set of correlations. The majority of correlations across both samples were non-significant. Although, for the university students, Dependency was significantly correlated with mean and maximum ratings of interpersonal upset, this correlation was in the unexpected direction, i.e., a negative correlation (see Table 12.4). The fact that Self-criticism was significantly correlated with maximum interpersonal upset also does not support the idea that a variety of life events will be perceived in line with a self-critical personality style (Table 12.5). However, for the remitted depressives group, Independence was significantly negatively correlated with mean and maximum impact on relationships. This result

indicates that, as Independence increases, the level of impact that events have on relationship related upset decreases, supporting the hypothesis. However, this result was in the minority, with the majority of correlations being non-significant.

Table 12.5. Achievement constructs. Correlations between Independence, Solitude and Self-criticism and life event variables at Time 1 ($n = 61$)

	University Students			Remitted Depressives		
	Solitude	Indepen- -dence	Self- criticism	Solitude	Indepen- -dence	Self- criticism
Mean impact						
Mean interpersonal upset (NEQ)	-0.03	0.07	0.21	0.04	-0.08	0.06
Mean impact on relationships (ELEI)	N/A	N/A	N/A	0.07	-0.43**	0.02
Mean achievement upset (NEQ)	0.10	0.11	0.13	0.06	-0.05	0.25
Mean impact on achievement (ELEI)	N/A	N/A	N/A	0.03	-0.18	0.04
Maximum impact						
Maximum interpersonal upset (NEQ)	0.07	0.10	0.31*	0.11	-0.02	-0.11
Maximum impact on relationships (ELEI)	N/A	N/A	N/A	-0.02	-0.36**	0.04
Maximum achievement upset (NEQ)	0.07	-0.01	0.21	-0.02	-0.08	0.14
Maximum impact on achievement (ELEI)	N/A	N/A	N/A	0.11	-0.03	-0.24

Note.

NEQ = Negative Experiences Questionnaire; ELEI = Episodic Life Events Inventory.

** $p < 0.01$; * $p < 0.05$.

N/A: As the ELEI was not administered to the university students group, no correlations could be calculated.

Discussion

Correlational analysis between the interpersonal impact and the achievement impact of sociotropic and autonomous events respectively demonstrated that, for both the university students group and the remitted depressives group, participants were not able to clearly differentiate between the impact that an event had on their relationships and the impact that it had on their achievements. For both events predetermined as sociotropic and events predetermined as autonomous, moderately strong and significant correlations were consistently found between participants' ratings of interpersonal impact and achievement impact. Therefore, across samples (university students and remitted depressives) and measures (self-report and interview measures of life events),

participants did not consistently rate events predetermined as sociotropic as having more of an interpersonal impact. Similarly, they did not consistently rate events predetermined as autonomous as having more of an achievement-based impact. These findings do not support the idea of a predetermined taxonomy of sociotropic or autonomous events. Although Clark et al. (1992) reported that judges unanimously categorised 90 out of the 104 items from the NEQ as either sociotropic or autonomous, it seems that there is less agreement among participants as to the sociotropic or autonomous impact of the various events.

To further investigate this question, an alternative set of correlations was then examined. This time correlations between interpersonal impact for sociotropic events and interpersonal impact for autonomous events were examined (and correlations between achievement impact for sociotropic events and achievement impact for autonomous events). Moderately strong and significant correlations for mean interpersonal impact for sociotropic events and autonomous events, and mean achievement impact for sociotropic events and autonomous events (across samples and self-report measures) again indicated that participants were not clearly differentiating between interpersonal impact and achievement impact. However, when *maximum* ratings of interpersonal impact and achievement impact were used, four out of six correlations were non-significant, indicating that participants were better differentiating between interpersonal impact and achievement impact. This suggests that, when just considering those life events that had the most (or maximum) interpersonal impact and achievement impact, participants can more clearly differentiate. However, for many life events, the interpersonal impact or achievement-related impact may be more ambiguous and may rely on individual interpretations.

To further investigate the idea that life events are perceived as either sociotropic or autonomous as a function of personality, rather than due to inherent properties of the life events themselves, correlational analysis was again used. This time, correlations between personality (sociotropy/dependency or autonomy/self-criticism)⁸¹ and the corresponding interpersonal impact or achievement-related impact for the life event variables were made. In contrast to the previous set of correlations, this analysis did not

⁸¹ Autonomy was operationalised into Solitude and Independence (SAS-R).

offer clear support for the idea that the interpersonal impact or achievement-related impact of an event is related to participants' own sociotropic or autonomous personality styles.

Hence, overall, although there was not strong support that they were rating the interpersonal or achievement-related properties of these events in line with their own sociotropic or autonomous personality styles, there was evidence to suggest that participants were likewise not clearly differentiating between interpersonal impact and achievement-related impact of events in a consistent manner. A number of previous researchers have outlined the pitfalls of a priori classification of life events (e.g., Abramson et al., 1997; Clark et al., 1999; Ingram et al., 1998; Kwon & Whisman, 1998; Robins et al., 1995). For example, Robins et al. (1995) identified the predetermined classification of events as sociotropic or autonomous as a serious barrier to the validity of findings from studies investigating the congruency hypothesis. Clark et al. (1999) also concluded that taxonomies are arbitrary and weaken the validity of studies. However, no previous study has looked directly at the relationship between life events, predetermined as sociotropic or autonomous, and participants' own ratings of the sociotropic or autonomous impact of an event. The current study certainly sheds some doubt on the validity of a priori classification of life events as sociotropic or autonomous, as is routinely done in research on the congruency hypothesis. The idea that individuals themselves assign meaning to an event is not new. Blatt and Zuroff (1992) themselves cite research to suggest that self-critical women maintain romantic relationships because of a desire to attain extrinsic rewards such as social status and respect rather than to share enjoyment and emotional closeness (Rempel et al., 1985, cited in Blatt & Zuroff, 1992). Zimmerman (1983) advocated that, to determine the amount of stress produced by a life event, it is necessary to assess the meaning of an event to the individual who experiences it.

Although the results of the current study are somewhat mixed, they do not strongly support the idea of a predetermined taxonomy. There is sufficient evidence to call not question the practice of classifying events as inherently sociotropic or autonomous. Further research is needed to look more closely at the sociotropic or autonomous properties of life events. It would be useful for future research to investigate males and

females separately, as it is likely that there are gender differences in the way people perceive life events.

CHAPTER 13: DISCUSSION OF METHODOLOGICAL ISSUES AND SUPPLEMENTARY ANALYSES

Introduction

In addition to investigating the three research questions outlined in Chapter 7 (see Chapters 10–12 for results and discussion), the current research also aimed to adhere to the methodological recommendations outlined in previous literature (predominantly the review of Coyne & Whiffen, 1995, but also Clark et al., 1999; Loftus & Marburger, 1983; Monroe, 1982; Raphael et al., 1991). As outlined in Chapter 7, much of the research on the congruency hypothesis has been criticised on methodological grounds, which brings into question the reliability, validity and, certainly, the generalisability of these studies.

Participants

As stated in Chapter 7, in the current study, participants included both a university students group and a remitted depressives group. This allowed direct comparison with previous research, which has predominantly utilised students, but advanced the area by investigating a high-risk population as recommended in the literature (Clark et al., 1999; Coyne & Whiffen, 1995).

In the current research, important differences concerning the particular parenting variables that predicted self-criticism between the university students and the remitted depressives were found (see Chapter 11). Whereas maternal protectiveness predicted self-criticism in the university students, lack of warmth predicted self-criticism for the remitted depressives. Prior to the present research, no one study in this area had included both a student sample and a clinical or at-risk sample (i.e., depressed or remitted depressive). The findings of the current study provide evidence that there may well be important differences between student and clinical samples.

Such differences between student and clinical samples highlight problems associated with generalising from student to clinical or at-risk samples. As discussed in Chapter 6, Coyne and Whiffen (1995) cautioned against generalising from what they term “distress” (elevations on self-report measures such as the BDI-II) in non-clinical

samples to clinical depression. They give the example of it being possible to obtain a sizable correlation between personality and self-reported distress if individuals who are high on dependency or self-criticism readily experience distress in the face of minor upset. This is relevant to student samples whose scores on the BDI have been shown to fluctuate significantly over periods of weeks or even hours without being at risk of clinical depression (Fechner-Bates et al., 1994). Studies investigating the congruency hypothesis would be best to focus on at-risk samples rather than focussing exclusively on student samples (Coyne & Whiffen, 1995). Of the five studies investigating the congruency hypothesis, reviewed previously in Chapter 6, the only study to fully support the congruency hypothesis for both interpersonal and achievement-related vulnerabilities (Hammen et al., 1989b) was also the only study to have depressed participants as opposed to student participants.

The reasons for the differences across the current samples are not immediately clear. However, one explanation is that dependency and self-criticism appear to manifest differently in clinical and non-clinical samples. Certainly, this has been found for dependency, with dependency being expressed in terms of valuing emotional closeness and intimacy in non-clinical samples (Clark & Mills, 1979, cited in Blatt & Zuroff, 1992), whereas it has tended to be expressed as apprehension and/or resentment about loss, neglect and abandonment in clinical samples (Blatt et al., 1982, cited in Blatt & Zuroff, 1992). Blatt et al. did not comment on different manifestations of self-criticism in clinical and non-clinical samples.

Measures

Measurement of Life Events: Interview versus Self-report

In line with research recommendations (Clark et al., 1999; Coyne & Whiffen, 1995; Duggal et al., 2000; Gorman, 1993; Monroe & Roberts, 1990; Monroe & Simons, 1991; Raphael et al., 1991; Simons et al., 1993), the current study used the interview method (as well as self-report measures) to measure life events. One major difference between self-report measures of life events and interviews such as the ELEI used in the current study (based on Brown's contextual threat methods; Brown & Harris, 1978) is that the former relies solely on the subject's interpretation of events and an unassisted recall of those stressors (Duggal et al., 2000). In contrast, the ELEI elicits extensive information

from subjects, and stress ratings are made by a trained research team, as well as by the participants themselves.

The results of the current study were quite different depending on whether judgements about the stressfulness of an event were made subjectively (by participants) or objectively (by the research team). In particular, subjective appraisals of stress made either in the self-report measure or during the interview were not significant predictors of change in dependency or self-criticism. Objective ratings of stress (based on Brown's contextual judgements of threat; Brown & Harris, 1978)⁸² were made by the research team, following the life events interview. The results showed that, whereas the objective rating of stress predicted change in dependency, the participants' subjective rating of the stressfulness of events did not.

To assess differences between subjective and objective stress ratings, a number of paired sample t-tests were conducted.

There was a statistically significant difference at Time 1 in the participants' ratings of stress⁸³ ($M = 3.20$, $SD = 0.80$) and the team's rating of stress ($M = 2.58$, $SD = 0.66$), $t(55) = p < 0.000$. The eta-squared statistic (0.40) indicated a large effect size.

There was a statistically significant difference at Time 2 in the participants' ratings of stressfulness ($M = 3.34$, $SD = 0.77$) and the team's rating of stressfulness ($M = 2.83$, $SD = 0.73$), $t(32) = 4.51$, $p < 0.000$. The eta-squared statistic (0.40) indicated a large effect size.

There was a statistically significant difference at Time 3 in the participants' ratings of stressfulness ($M = 3.22$, $SD = 0.65$) and the team's rating of stressfulness ($M = 2.48$, $SD = 0.52$), $t(33) = 5.46$, $p < 0.000$. The eta-squared statistic (0.50) indicated a large effect size.

⁸² As discussed previously, contextual judgements of threat take into account the specific social context of the event's occurrence, but not the emotional response.

⁸³ The variables "mean stress" and "mean team rating of stress" were entered into the following three paired sample t-tests.

Thus, in all three time periods, mean subjective ratings of stress were greater than mean objective ratings of stress. This tendency for participants to rate their experiences as more stressful compared to an independent observer has been found previously. Simons et al. (1993) found that only a quarter of events that participants rated as severe were judged to be severe by independent judges.

A potential reason for the difference between subjective and objective ratings of stress is Brown's concept of effort after meaning (Brown & Harris, 1989). The idea here is that memories become systematically biased over time to fit with individuals' personal organising tendencies, and events tend to be rated as more stressful if emotional or mental harm resulted. In contrast, because the research team does not know a participant's emotional reaction to events, they do not take this into account when making their judgements about the stressfulness of events.

Duggal et al. (2000) concluded that the self-report method may best be considered an efficient, cost-effective estimate of the overall level of subjectively experienced stress. However, if, for example, there are questions relating to the aetiology of depression, they suggest that an interview, based on Brown's methods, would be more likely to yield valid results. The current research certainly adds weight to the caution of Duggal et al. Coyne and Whiffen (1995) also stress that the interpretability of research findings depends on the validity of the measurement of life stress.

Measurement of Depression: Interview versus Self-report

In the current research, results from the self-report and interview-based measures of depressed mood were quite different. Although all the correlation coefficients between the BDI-II and the HRSD at the various time intervals were significant ($p < 0.01$), they varied between the time intervals and were as follows: Time 1, $r = 0.45$; Time 2, $r = 0.83$; Time 3, $r = 0.64$.⁸⁴ Previous research has found similar variability in the correlations between these two variables. Sayer et al. (1993) identified 12 studies that reported the correlation between the BDI⁸⁵ and the HRSD at first assessment of

⁸⁴ As an aside, correlations between the BDI and the HRSD increased with time. Previous studies have shown modest HRSD-BDI correlations at baseline, with improvement in this correlation with repeated assessment (Sayer, Sackeim, Moeller, Prudic, Davanand, Coleman, & Kiersky, 1993). However, these studies were treatment studies, and, in the research of Sayer et al., the improved correlations later in treatment were found to be due to the fact that clinicians and patients agree more closely at lower levels of symptom severity.

psychiatric samples. They found that correlations ranged from 0.16 (Schnurr, Hoaken, & Jarrett, 1976, cited in Sayer et al., 1993) to 0.73 (Davies, Burrow, & Poynton, 1975, cited in Sayer et al., 1993), with the median correlation being 0.58. Taken together, the current research in conjunction with previous studies would suggest that, despite significant correlations between BDI-II and HRSD total scores, these two measures appear to be assessing different aspects of depressed mood.

When investigating the relative stability of depressed mood (Chapter 11), the test-retest correlation for the HRSD from Time 1 to Time 3 was non-significant ($r = 0.36$), compared with a significant test-retest correlation for the BDI-II ($r = 0.45$, see Table 11.3). This trend of larger correlations between two time intervals for BDI-II scores than for HRSD scores has been found previously (Bagby et al., 2001; Santor et al., 1997a; Zuroff et al., 1999). The reason for this was not discussed by any of the previous authors. Of note, the previous three studies all included currently depressed participants who were participating in treatment for their depression. Changes in depressed mood from baseline to follow-up would therefore be expected, and the HRSD appears more sensitive to these changes than the BDI-II. This is in line with a quantitative review of the outcome literature using the two instruments, which found the BDI⁸⁵ to be relatively insensitive compared with the HRSD (Lambert et al., 1986).

Further differences between the HRSD and the BDI-II were evident from correlations between the personality variables and depressed mood at both Time 1 and Time 3. Although significant correlations were seen between BDI-II total scores and the personality constructs (excepting Independence), the results showed no significant correlations between HRSD total scores and the personality variables (Table 11.5). This is also in line with previous research, which has shown the relationship between personality variables and self-reported distress to be greater than that between personality variables and measures of clinical depression (Coyne & Whiffen, 1995). This is because the size of a correlation coefficient is constrained by the similarities in the distributions of the two variables involved. Because elevated scores on self-report inventories such as the BDI are more prevalent than diagnosable depression, the size of

⁸⁵ These studies used the first edition of the BDI, as opposed to the current study, which used the Beck Depression – Inventory, Second Edition.

⁸⁶ Because the study was published in 1986, the original version of the BDI was used in the meta-analysis.

correlations between personality and self-reported distress is greater than that of correlations between personality and clinician-rated depression (Coyne & Whiffen, 1995). One other explanation of course is method variance.

Longitudinal Design

Based on research recommendations, it was decided that the use of a longitudinal design was essential in the current research. For example, when considering the state- or trait-like nature of personality, Zuroff et al. (1999) criticised cross-sectional designs as being a “relatively weak test” (p. 76) of the vulnerability theory. There is no doubt that the use of a longitudinal design with interview methods for assessing life events stress and depression in the current study was time consuming and expensive. However, the decision for a longitudinal design was seen as essential to allow for valid and reliable research to be conducted. For example, the use of a longitudinal design in the current study enhanced the validity of the results because event appraisals were measured prior to the onset of any subsequent depressive response. In this way, the confounding effects of mood on event reporting or retrospective reports of parenting were avoided. This also minimised a similar negative recall bias whereby life events may be viewed as more stressful if depression follows (effort after meaning; Brown & Harris, 1989; Dohrenwend et al., 1987). This type of response bias usually results in an over-reporting of negative life events (Katschnig, 1986).

CHAPTER 14: DISCUSSION: SUMMARY OF OVERALL FINDINGS AND CONCLUSIONS

The congruency hypothesis posits the idea that depression will most likely occur when life events match interpersonal or achievement-related vulnerabilities. Individuals with predominantly sociotropic or dependent personality styles will be susceptible to depression following social losses. Conversely, autonomous or self-critical individuals will be vulnerable to stressful life events that involve a failure to exercise control over their environment or to achieve their goals.

Despite its intuitive appeal or what Coyne and Whiffen term the “simple elegance” (1995, p. 372) of the congruency hypothesis (Beck, 1983, 1987), this model has not stood up to empirical validation. In their seminal review, Coyne and Whiffen (1995) suggested that this could be because some of the key assumptions underpinning this line of research were just that – untested assumptions. This notion provided the impetus for the current studies which, after some refining, focused on three of the assumptions underlying the congruency hypothesis. The congruency hypothesis itself was not examined directly, as the focus here was on the more basic underlying assumptions.

The first research question investigated the developmental origins of dependency and self-criticism by assessing participants’ perceptions of the parenting style they had experienced in the first 16 years of their life, and how this related to their current personality style. This was seen as important, as the view that dependent and self-critical personality styles are stable and enduring vulnerability factors is essential for a diathesis-stress model. The term “diathesis” is borrowed from medicine and refers to “a fixed and generally congenital or even genetic predisposition to abnormal functioning and disease” (Coyne & Whiffen, 1995, p. 374). This definition is consistent with Blatt’s (1974) theory that dependency and self-criticism were independent and enduring personality modes that arose from different early childhood experiences: dependency from a parenting style characterised by a lack of care, and self-criticism from a parenting style that was harsh, critical or overprotective .

However, previous research has not been consistent in supporting Blatt's hypothesis. This was certainly so in the current study. Although the findings from the university students were more in line with Blatt's theory, those of the remitted depressives group were not. Evidence of a specific type of early childhood experience of parenting relating to each personality style did not emerge.

The second research question investigated the trait- or state-like nature of sociotropy and autonomy and dependency and self-criticism. Again, this is important as it relates to the idea that, for a diathesis-stress model, with personality as the diathesis, personality must be stable and enduring. In line with some previous studies, it was found that there was no absolute change in either the interpersonal or achievement-related constructs over a 6-month time period. However, absolute change was seen in the interpersonal constructs over a 12-month time period. This finding is important because, typically, studies investigating the stability of personality have measured change over time periods of well less than 1 year. The current research suggests that time periods of 1 year and possibly more are needed to detect absolute changes in personality styles. This ties in with the view of Coyne and Whiffen (1995) that sociotropy/dependency and autonomy/self-criticism are a reflection of social context, such as current intimate relationships, rather than simply reflecting fixed personality styles. Given this view, it would not be surprising to find that longer time frames are necessary for people to experience significant changes in their social context, such as intimate interpersonal relationships, and for these changes to be reflected in their "personality". Another example of something that might create changes at the level of personality might be psychotherapy. Certainly, cognitive therapists would argue that psychotherapy can change fundamental core beliefs about how we define ourselves and our self worth (e.g., Beck, 1995). Despite absolute change in interpersonal constructs over the 12-month time period, high relative stability was also found over this time frame. This is in line with previous research (Zuroff et al. 1999) which has found that it is possible for a group to show large and significant changes in means scores on a trial and yet demonstrate high relative stability.

To start to investigate the alternative hypothesis of Coyne and Whiffen (1995) that levels of sociotropy/dependency or autonomy/self-criticism reflect current life

circumstances rather than enduring personality traits, the second part of this research question examined the predictors of change in dependency and self-criticism. The results demonstrated that stress resulting from significant life events as rated by an independent research team significantly predicted a change in dependency. In contrast, the stress resulting from negative life events, as rated by individuals themselves on either interview or self-report did not predict this change. This provided some support for the notion that levels of dependency can be affected by life circumstances.

Further longitudinal research is needed to investigate the possible sources of changes on sociotropy and dependency scores. In particular, one question is how this relates to ongoing and changing life circumstances. In order to capture such changes, this research would need to occur over a number of years. The current trend for short time frames of weeks and months is very unlikely to reveal such relationships.

The current research supports the use of the interview method of assessing life events rather than self-report measures. In particular, the current research underscores the value of objective (or interviewer-based) ratings of the stressfulness of life events. Future research is needed to look more closely at this discrepancy between personal (subjective) ratings and team (objective) ratings of stress arising from negative life events.

The third study investigated the assumption that life events can be classified a priori as being either sociotropic or autonomous, as is routinely the case in research on the congruency hypothesis. This is a fundamental issue as, in order to test whether depression is more likely to occur when negative life events are congruent with an interpersonal or achievement-related personality style, it is necessary, based on current applications of theory, to classify life events as interpersonal (sociotropic) or achievement related (autonomous). Certainly, the a priori classification of events as sociotropic or autonomous has been criticised, and the need for individual perceptions of life events to be considered has been suggested (Robins et al., 1990). However, no previous research has directly tested this assumption. The current study found that, across samples (university students and remitted depressives) and measures (self-report and interview measures of life events), participants did not reliably rate events as having more of an interpersonal or achievement impact in line with their own interpersonal or

achievement-oriented personality styles. This pattern of findings supports previously voiced concerns that a predetermined classification of life events as interpersonal or achievement related is a barrier to the validity of studies investigating the congruency hypothesis (Clark et al., 1999; Robins et al., 1995).

Studies of the congruency hypothesis have also been criticised on methodological grounds. For example, Coyne and Whiffen (1995) made the point that:

“Improvements in the assessment of depression, life stress and personal functioning should give psychologists greater confidence in the interpretation of statistical results”. (p. 374).

The current research took care to avoid many of the problematic methodologies that have been previously identified. The results demonstrated very clearly that, in some areas, the results obtained are in no small part dependent on the methodology employed. For example, very different results arose from the clinical and university student samples. Similarly, objective ratings of stress, gathered through interview, provided very different results compared with subjective ratings, gathered via interview or self-report checklists. The results were also different depending on whether depression was assessed by clinician-based interview methods (HRSD) or using a self-report measure (BDI-II).

Overall, the current research suggests that many of the concerns and cautions originally raised by Coyne and Whiffen (1995) are valid. Certainly, the three assumptions investigated in the current study, assumptions that underpin research investigating the congruency hypothesis, were not fully supported. The congruency hypothesis involves three important components, namely personality, life events and depression. It is only through the accurate conceptualisation and measurement of each of these three components that the results of subsequent research are going to be valid and reliable.

Future research needs to adhere to methodological rigour. In terms of personality measurement, autonomy needs to be operationalised into two subfactors: one less adaptive (solitude) and one more adaptive (independence). The measurement of sociotropy or dependency is generally accepted as less problematic, and more support

for the congruency hypothesis has been found in terms of the interpersonal vulnerability. Certainly, the most recent and well-validated measures of sociotropy/dependency and autonomy/self-criticism need to be used.

In terms of depression, the distinction needs to be made between depressed mood (or what Coyne and Whiffen (1995) call “distress”) and clinical depression. Less than a third of participants in non-clinical populations who scored above standard depressive cut-off points on self-report measures such as the BDI have been shown to meet the criteria for major depression (Coyne & Whiffen, 1995). As the congruency hypothesis aims to explain the onset or recurrence of clinical depression, it makes sense to keep clinical depression as the focus of the investigation. Studies using student samples and measuring depressed mood through the administration of the BDI-II are of limited value when investigating a theory to explain a clinical disorder. Instead, the current study supports the view of Coyne and Whiffen (1995) that interview-rated scales such as the HRSD administered to high risk samples are going to be of more use.

In terms of life events, the current study demonstrates two important things. First, when assessing the stressfulness of a life event, objective and subjective ratings of stress are likely going to produce different results. Second, there is little evidence to support the assumption, made in research on the congruency hypothesis, that life events can be classified a priori as either sociotropic or autonomous.

The major limitation of the current research is the power of the analysis. Sixty-one participants at the beginning of the study, although one of the bigger studies in terms of a clinical sample, is still limiting in terms of regression analysis. This number reduced to 41 by the end of the study, further limiting the power of analysis. However, the research does provide support for future research to look more closely at these underlying assumptions, rather than taking them as simply a given.

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APPENDICES

**APPENDIX A – SUMMARY OF REVISIONS OF THE SOCIOTROPY
AND AUTONOMY SCALE AND THE DEPRESSIVE EXPERIENCES
QUESTIONNAIRE**

Summary of revisions of the Sociotropy and Autonomy Scale

Author	Number of items	Sociotropic subfactor(s)		Autonomous subfactor(s)		Notes
Beck Epstein, Harrison & Emery (1983)	60	I.	Concern About Disapproval	I.	Mobility/Freedom From Control	Beck (1983) performed separate factor analyses on the 30 sociotropic and 30 autonomous items. An orthogonal rotation was used for the sociotropy factors and an oblique rotation for the autonomy factors. Sociotropy subscales were positively correlated. The Autonomy subscales had weak intercorrelations. This factor structure has not been replicated in a large independent sample.
		II.	Attachment/Concern About Separation	II.	Preference For Solitude	
		III.	Pleasing Others	III.	Individualistic Achievement	
Robins (1985)	60	Sociotropy		I.	Freedom from Control	Did factor analysis on original 60 items.
				II.	Preference for Solitude	
Clark and Beck (1991)	93	Sociotropy		I.	Solitude/Interpersonal-Insensitivity	Clark and Beck (1991) suggest that the Sociotropy and Solitude subscales are especially relevant to depression. Clark and Beck (1991) recommended this scale is not used for general use until further research is conducted.
				II.	Independency	
				III.	Individualistic Achievement	

Robins, Ladd, Welkowitz, Blaney, Diaz, & Kutcher. (1994) ⁸⁷	48	Sociotropy	Autonomy	Personal Style Inventory (PSI) 10 items are taken from the original SAS (Beck et al., 1983). The other 38 items were formulated independently.
Clark, Steer, Beck, & Ross. (1995). ⁸⁸	59	Sociotropy	I. Solitude II. Independence	Factor analysis performed on total SAS item pool. Solitude and Independence emerged as two naturally occurring orthogonal dimensions of autonomy. Solitude includes items from Beck et al. (1983) Mobility/Freedom From Control subfactor. Independence includes items from Beck et al. (1983) Individualistic Achievement subscale.

⁸⁷ This revision resulted in a new measure, namely the Personal Styles Inventory (PSI) but originated from dissatisfaction with the original SAS (Beck, 1983).

⁸⁸ This revision of the SAS was used in the current study.

Summary of revisions of the Sociotropy and Autonomy Scale cont...

Author	Number of items	Sociotropic subfactor(s)	Autonomous subfactor(s)	Notes
Rude & Burnham (1995).		I. Connectedness (valuing of relationships) II. Neediness (anxious concerns about possible rejection). III.	N/A (Did not look at autonomous scale)	Only looked at interpersonal scales. Factor analysed DEQ-Dependency and SAS-Sociotropy items separately and together.
Clark, Steer, Haslam, Beck & Brown (1997).	60	Dependent (similar to Sociotropy, Beck 1983)	I. Independent (similar to Solitude, Clark et al. 1995) II. Individual Achievement (Similar to Independence, Clark et al., 1995)	Used cluster analyses to identify personality types. Also had a Low Scoring group.
Sato & McCann (1997)		I. Sensitivity II. Attachment	I. Insensitivity II. Control achievement	Compares SAS (1991) to PSI (1994). Extracts factors from an integration of the two scales.
Bieling, Beck & Brown (2000).		I. Preference for affiliation II. Fear of criticism and rejection	I. Independent goal attainment II. Sensitivity to others control	Not published when I conducted my data collection.

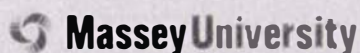
Summary of revisions of the Depressive Experiences Questionnaire

Author	Number of items	Dependent factor(s)	Self-Critical factor(s)	Notes
Blatt, D'Afflitti, & Quinlan. (1976).	66	Dependency	Self-Criticism	Orthogonal rotation
Welkowitz, Lish & Bond (1985).	43	Dependency	Self-Criticism	Most commonly used of the DEQ scales. Unit weighted scoring system. Not orthogonal: Correlation between Dependency and Self Criticism = .49
Bagby, Parker, Joffe & Buis. (1994)	35	Dependency	Self-Criticism	Not orthogonal: Especially poor for depressed outpatient sample. Correlation between Dependency and Self Criticism: Student sample = .38 Depressed outpatient sample = .61

Summary of revisions of the Depressive Experiences Questionnaire cont...

Author	Number of items	Dependent subfactor(s)	Self-critical subfactor(s)	Notes
Blatt, Zohar, Quinlan, Zuroff & Mongrain (1995).	49	I. Dependence II. Relatedness	Self-Criticism	
Viglione, Lovette & Gottlieb (1995)	21	Anaclitic	Introjective	This revision is called the Theoretical DEQ (TDEQ).
Santor, Zuroff, Mongrain & Fielding (1997)	60	Dependency	Self-Criticism	Orthogonal varimax rotation used in factor analysis. Referred to as the McGill revision.
				Orthogonal

APPENDIX B – APPROVAL LETTER FROM MASSEY UNIVERSITY ETHICS COMMITTEE



Private Bag 11 222,
Palmerston North,
New Zealand
Telephone: 64 6 356 9099

29 March 1999

Ms Susan WATSON
School of Psychology
TURITEA

Dear Susan

Re: Human Ethics Application – MUHEC 98/212
"A Closer Look at the Congruency Hypothesis for the Etiology of
Depression with a Focus on Methodology and Measurement"

Thank you for your letter of 16 March 1999 and the amended Information Sheets for the different phases of your research. Thank you also for the copies of the Confidentiality Agreement and Questionnaire.

The amendments you have made and the explanations you have provided now meet the requirements of the Massey University Human Ethics Committee and the ethics of your application are approved.

Yours sincerely

A handwritten signature in dark ink, appearing to read "Philip Dewe".

Professor Philip Dewe
Chairperson
Turitea, Palmerston North Campus
Massey University Human Ethics Committee

cc Dr Kevin Ronan, School of Psychology - Turitea, Massey University
Associate Professor Paul Merrick, School of Psychology - Albany, Massey University

Te Kōwhiri ki Pūrehuroa

Inception to Infinity: Massey University's commitment to learning as a life-long journey

**APPENDIX C – INFORMATION SHEET AND CONSENT FORM –
REMITTED DEPRESSIVES GROUP: INITIAL CONTACT, TIME 1,
TIME 2 AND TIME 3**

(Initial contact)

INFORMATION SHEET

This research is being conducted by Susan Watson as part of her doctoral work at Massey University, under the supervision of Dr. Kevin Ronan. While Susan Watson and Dr Ronan Ronan are managing the research, there are a number of interviewers who will be helping with later aspects of the project. If you would like to talk to either Susan Watson or Dr Ronan Ronan they can both be contacted through the Psychology Department, Massey University on (06) 356-9099.

This study is about the relationship between depression, life events and personality. There are several parts to this study. The initial part of the study involves filling out the enclosed questionnaire and mailing it back in the envelope provided. We estimate that this will take you about 5 minutes. Upon receiving the returned questionnaire you will be contacted to discuss your possible involvement in the second part of the study. This would involve meeting individually with one of the research team and talking in more depth about life events and emotional functioning. However, filling out this questionnaire does not mean that you are under any obligation to take part in the second part of the study.

Your involvement will be strictly confidential and the enclosed questionnaire is labelled with a code number to ensure your anonymity. All questionnaires will be stored securely or destroyed at the end of the project.

If you do take part in the research you have the right to stop at any time and you do not have to answer any questions that you do not want to.

If you would like a summary of the results of the research, these can be sent to you at the end of the project. The research findings will be presented at conferences and published in professional journals so that other psychologists can learn from our findings. Again, the results will be presented in summative format and no information that could identify an individual will be presented.

Thank you for your consideration.

Susan Watson

**Senior Clinical Psychologist
Principal Researcher**

Kevin Ronan (PhD)

**Senior Clinical Psychologist
Senior Lecturer**

(Time 1)

INFORMATION SHEET

This research is being conducted by Susan Watson as part of her doctoral work at Massey University, under the supervision of Dr Kevin Ronan. While Susan and Dr Ronan are managing the research, there are a number of other people who will be conducting the interviews. Susan Watson and Dr Ronan can both be contacted through the Psychology Department, Massey University on (06) 356-9099.

This study is about the relationship between depression, life events and personality. This part of the research involves filling out some standardised questionnaires and taking part in an interview that addresses life events and factors related to emotional functioning.

During the interview the interviewer will take notes to help them remember what is discussed. This information will be coded in such a way that other people working on the research project will not be able to tell who was being interviewed when they handle the notes. All record forms will be stored securely or destroyed at the end of this study. The interviews will be audio-taped as a back up for the interviewer to refer back to, but again, the tapes will be coded and unidentifiable except to the principal researcher. All tapes also will be kept securely until the end of the research when they will be destroyed.

This initial meeting is estimated to take a little over two hours. If at the end of this interview you agree to take part in more follow-up research we will ask you to provide us with a contact address and telephone number. We will contact you after six months and possibly again after 12 months. The follow up interview would be similar to today's interview. As a way of partly compensating our participants for the time they are giving to participate in the research, participants will receive \$15 for each of the interviews.

If you do take part in this research you have the right to stop at any time and you do not have to answer any questions that you do not want to. Also you can ask any questions about the study at any time during the study.

If you would like a summary of the results of the research, these can be sent to you at the end of the project. The research findings will be presented at conferences and published in professional journals so that other psychologist can learn from our findings. Again, the results will be presented in summative format and no information that could identify an individual will be presented.

Thank you for your consideration

Susan Watson
Principal Researcher

Kevin Ronan, PhD
Senior Lecturer

(Time 2)

INFORMATION SHEET

As you know this research is being conducted by Susan Watson as part of her doctoral work at Massey University under the supervision of Dr Kevin Ronan. While Susan Watson and Dr Ronan Ronan are managing the research, there are a number of other people who will be conducting the interviews. Susan and Dr Ronan can be contacted through the Psychology Department, Massey University on (06) 356-9099.

This research is about life events and how people feel emotionally. An important part of this study is following people over a period of time. For this reason we are contacting people who said after the last interview they might be interested in being involved in the second part of the research.

The second assessment will be similar to the first but it will be briefer, as there is background information that does not have to be covered again. We expect that it will take between one and one and a half hours. As with last time, the information will be coded in such a way that other people working on the research project will not be able to tell who was being interviewed when they handle the notes. All questionnaires and tapes will be stored securely and will be destroyed at the end of the project.

As a way of partly compensating our participants for the time they are giving to this research, participants will receive \$15 for the second interview.

The fact that you have been involved in this research before does not mean that you have to participate again. If you do take part you have the right to stop at any time and you do not have to answer any questions that you do not want to. Also, you can ask questions about the study at any time during the study. You will be invited to take part in the third and final part of the research in 6 months time, but there is no obligation for you to take part in this. If you would like to be invited to take part in the next phase of the study we will record your contact address today.

If you would like a summary of the results of the research, these can be sent to you at the end of the project. The research findings will be presented at conferences and published in professional journals so that other psychologists can learn from our findings. Again, the results will be presented in summative format and no information that could identify an individual will be presented.

Thank you for your consideration.

Susan Watson
Principal Researcher

Kevin Ronan, PhD
Senior Lecturer

(Time 3)

INFORMATION SHEET

As you know, this research is being conducted by Susan Watson as part of her doctoral work at Massey University, under the supervision of Dr Kevin Ronan. While Susan and Dr Ronan are managing the research, there are a number of other people who will be conducting the interviews. Susan Watson and Kevin Ronan can both be contacted through the Psychology Department, Massey University on (06) 356-9099.

An important part of this study is following people over a period of time. For this reason we are meeting with people who we have met with twice already. The third interview will be similar to the last interview and will take about one to one and a half hours. Again, the information will be coded in such a way that other people working on the research project will not be able to tell who was being interviewed when they handle the notes. All questionnaires and tapes will be stored securely.

As a way of partly compensating our participants for the time they are giving to this research, participants will receive \$15 for the second interview.

The fact that you have been involved in this research before does not mean that you have to participate again. If you do take part you have the right to stop at any time and you do not have to answer any questions that you do not want to. Also, you can ask questions about the study at any time during the study.

If you would like a summary of the results of the research these can be sent to you at the end of the project. The research findings will be presented at conferences and published in professional journals so that other psychologists can learn from our findings. Again, the results will be presented in summative format and no information that could identify an individual will be presented.

Thank you for your consideration.

Susan Watson
Senior Clinical Psychologist
Principal Researcher

Kevin Ronan, PhD
Senior Clinical Psychologist
Senior Lecturer

(Initial contact)

CONSENT FORM

Life Events and How People Feel Emotionally

I have read the information sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction and I understand that I may ask further questions at any time.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name will not be used without my permission. *(The information will be used only for this research and publications arising from this research project).*

I agree/do not agree for the researchers to contact me to see whether I would be interested in participating in the follow-up. I understand even if they contact me, I do not have to participate in the follow-up assessment.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed:

Name:

Date:

(Time 1)

CONSENT FORM

Life Events and How People Feel Emotionally

I have read the information sheet and have had the details of the study explained to me.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name will not be used without my permission. *(The information will be used only for this research and publications arising from this research project).*

I agree/do not agree to the interview being audio taped.

I also understand that I have the right to ask for the audio tape to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed:

Name:

Date:

(Time 2)

CONSENT FORM

Life Events and How People Feel Emotionally

I have read the information sheet and have had the details of the study explained to me.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name will not be used without my permission. *(The information will be used only for this research and publications arising from this research project).*

I agree/do not agree to the interview being audio taped.

I also understand that I have the right to ask for the audio tape to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed:

Name:

Date:

(Time 3)

CONSENT FORM

Life Events and How People Feel Emotionally

I have read the information sheet follow-up and have had the details of the study explained to me. My questions have been answered to my satisfaction and I understand that I may ask further questions at any time.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name will not be used. (The information will be used only for this research and publications arising from this research project).

I agree/do not agree to the interview being audio taped.

I also understand that I have the right to ask for the audio-tape to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed:

Name:

Date:

**APPENDIX D – INFORMATION SHEET AND CONSENT FORM –
UNIVERSITY STUDENTS: TIME 1, TIME 2 AND TIME 3**

(Time 1)

INFORMATION SHEET

This research is being conducted by Susan Watson as part of her doctoral work at Massey University, under the supervision of Dr. Kevin Ronan. If you would like to talk to either Susan Watson or Kevin Ronan they can both be contacted through the Psychology Department, Massey University on (06) 356-9099.

This study is about the relationship between depression, life events and personality. There are several parts to this study. The main part of this study involves a group of people who have experienced clinical depression recently, and these people are being interviewed as well as filling out some questionnaires. Your participation is as a part of the control group, that is, a group of university students.

Taking part in the study would involve filling out a set of questionnaires and this is estimated to take about 30 minutes. If you do take part in the research you have the right to stop at any time and you do not have to answer any questions that you do not want to. As a way of partly compensating our participants for their time, you will receive \$10 for filling out the questionnaire and this will be mailed to you upon the receipt of the returned questionnaire.

The study is a longitudinal one, and we are hoping that people will agree to fill out the questionnaires on three occasions over the next year, six months apart. However filling out the questionnaires now does not mean that you are under any obligation to participate again.

Your involvement will be strictly confidential and the enclosed questionnaire is labeled with a code number to ensure your anonymity. All questionnaires will be stored securely or destroyed at the end of the project.

If you would like a summary of the results of the research, these can be sent to you at the end of the project. The research findings will be presented at conferences and published in professional journals so that other psychologists can learn from our findings. Again, the results will be presented in summative format and no information that could identify an individual will be presented.

Thank you for your consideration.

Susan Watson
Senior Clinical Psychologist
Principal Researcher

Kevin Ronan (PhD)
Senior Clinical Psychologist
Senior Lecturer

(Time 2)

INFORMATION SHEET

As you know this research is being conducted by Susan Watson as part of her doctoral work at Massey University, under the supervision of Dr Kevin Ronan. Susan Watson and Dr Kevin Ronan can both be contacted through the Psychology Department, Massey University on (06) 356-9099.

An important part of this study is following people over a period of time. For this reason we are contacting people who indicated that they might be interested in being involved in the second part of the research. You would be participating in the research as part of the *control* or *non depressed* group. Taking part in the research involves filling out the same set of questionnaires that you filled out six months ago. It is estimated that this will take you about 30 minutes. As a way of partly compensating participants for the time they gave to participate in this research participants will receive \$10 upon receipt of the questionnaires.

The fact that you have been involved in this research before does not mean that you have to participate again. If you do take part in the research you have the right to stop at any time and you do not have to answer any questions that you do not want to.

Your involvement will be strictly confidential and the enclosed questionnaire is labelled with a code number to ensure your confidentiality. All questionnaires will be stored securely and destroyed at the end of the project.

If you would like a summary of the results of the research, these can be sent to you at the end of the project. The research findings will be presented at conferences and published in professional journals so that other psychologists can learn from our findings. Again, the results will be presented in summative format and no information that could identify an individual will be presented.

Thank you for your consideration.

Susan Watson
Senior Clinical Psychologist
Principal Researcher

Kevin Ronan (PhD)
Senior Clinical Psychologist
Senior Lecturer

(Time 3)

INFORMATION SHEET

As you know this research is being conducted by Susan Watson as part of her doctoral work at Massey University, under the supervision of Dr Kevin Ronan. Susan Watson and Dr Kevin Ronan can both be contacted through the Psychology Department, Massey University on (06) 356-9099.

This study is about the relationship between depression, life events and personality. It is the third and final part of some research that you participated in six and 12 months ago. You are participating in the research as part of the *control* or *non depressed* group. Taking part in the research involves filling out the same set of questionnaires that you filled out six months ago. It is estimated that this will take you about 30 minutes. As a way of partly compensating participants for the time they are giving to participate in this research participants will receive \$10 upon receipt of the questionnaires.

The fact that you have been involved in this research before does not mean that you have to participate again. If you do take part in the research you have the right to stop at any time and you do not have to answer any questions that you do not want to.

Your involvement will be strictly confidential and the enclosed questionnaire is labelled with a code number to ensure your confidentiality. All questionnaires will be stored securely and destroyed at the end of the project.

If you would like a summary of the results of the research, these can be sent to you at the end of the project. The research findings will be presented at conferences and published in professional journals so that other psychologists can learn from our findings. Again, the results will be presented in summative format and no information that could identify an individual will be presented.

Thank you for your consideration.

Susan Watson
Senior Clinical Psychologist
Principal Researcher

Kevin Ronan (PhD)
Senior Clinical Psychologist
Senior Lecturer

(Time 1)

CONSENT FORM

Life Events and How People Feel Emotionally

I have read the information and I understand that I may contact Susan Watson or Dr Kevin Ronan if I have any further queries. .

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name will not be used without my permission. *(The information will be used only for this research and publications arising from this research project).*

I agree/do not agree for the researchers to contact me in six months to see whether I would be interested in participating in the follow-up. I understand even if they contact me, I do not have to participate in the follow-up assessment.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed:

Name:

Date:

Contact address:
.....
.....
.....

Contact telephone number:
.....

(Time 2)

CONSENT FORM

Life Events and How People Feel Emotionally

I have read the information sheet and have had the details of the study explained to me.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name will not be used without my permission. *(The information will be used only for this research and publications arising from this research project).*

I agree/do not agree to the interview being audiotaped.

I also understand that I have the right to ask for the audiotape to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed:

Name:

Date:

(Time 3)

CONSENT FORM

Life Events and How People Feel Emotionally

I have read the information sheet and have had the details of the study explained to me.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name will not be used without my permission. *(The information will be used only for this research and publications arising from this research project).*

I agree/do not agree to the interview being audiotaped.

I also understand that I have the right to ask for the audiotape to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed:

Name:

Date:

APPENDIX E – CONFIDENTIALITY AGREEMENT

Confidentiality Agreement

Principal Investigators: Susan Watson and Dr Kevin Ronan

Maintaining confidentiality and privacy for people taking part in this study is a high priority. Participants have been assured that everything they discuss/disclose will be treated with the strictest confidence. It is vital that you do not discuss this confidential information with anyone outside the research team.

To aid confidentiality all participants will be assigned a code number and all written material such as questionnaires relating to that participant will be marked with the corresponding code number, rather than the person's name. The list of participants names will be kept safely by Susan Watson.

It is important for you to store all written information and tapes securely before handing this over to Susan.

It is important for you to store all written information and tapes securely before handing this over to Susan. You will be provided with a key to a filing cabinet at the Psychology Clinic for this purpose.

I have read the Confidentiality Agreement and have had an opportunity to have my questions regarding this policy answered by either Susan Watson or Dr Kevin Ronan. I agree to maintain the confidentiality of people taking part in this study.

Signed:

Witnessed:

Date:

APPENDIX F – INFORMATION ABOUT ACCESSING LOCAL COUNSELLING AND MENTAL HEALTH SERVICES

Local Counselling and Mental Health Services

Community Counselling Services

Presbyterian Support
69 Brightwater Terrace, Palmerston North
Ph. 350-2080

ACROSS
Amesbury Street
Ph. 356-7486.

Youth One Stop Shop
7a Edgeware Road
355-5906

Student Counselling Services

Student Counselling, Massey University
Ph. 350-5799

Student Counselling, UCOL
Ph. 952-7001.

Community Mental Health

Palmerston North Community Mental Health
Ph. 350-8184

Fielding Community Mental Health
Ph. 323-8184

Registered Psychologists

Robyn Salisbury
Level 7
1 Fitzherbert Ave
Ph. 354-2448

Laura Crymble
Level 7
1 Fitzherbert Ave
Ph. 354-2448

Victor Soeterick
482 Church Street
Ph. 952-5560

If you need urgent assistance contact the Crisis Team, MidCentral Health: Ph 0800 653357

APPENDIX G – TRAINING MANUAL

TRAINING MANUAL

**The Relationship between Depression,
Life Events and Personality.**

Susan Watson

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Theoretical underpinnings of the study

The relationships between stressful life events and depression

Studies on stressful life events have consistently indicated a relationship between events and depression. However the relationship is typically small, and the majority of individuals who experience even major stressors do not become depressed. It has become clear that the predictive utility of information about stressful events and circumstances and its relationship to depression requires refinements in knowledge about mediating variables (Hammen, Ellicott, Gitlin, & Jamison, 1989).

The event-congruency hypothesis

The event-congruency hypothesis has three key components, namely, life events, personality and depression. It predicts that a person is more likely to become *depressed* if they experience a negative life event that is *line*, or congruent with, their personality style. For example a person who places a high value on interpersonal relationships will more likely become depressed following a relationship break up than someone who places a high value on their career achievements

The event-congruency hypothesis classifies personality into two distinct personality types. One that is affiliative in nature and one that is achievement based. The first personality type (labeled 'sociotropic' or 'dependent') describes someone who gains their self worth from establishing secure interpersonal relationships. The second type ('autonomous' or 'self-critical') describes someone who is invested in preserving their freedom and independence and achieving goals. The existence of these two personality types has been hypothesised by authors from two distinct theoretical backgrounds; Blatt (Blatt, D'Afflitti & Quinlan (1976), a psychodynamic psychologist and Beck (1983), a cognitive psychologist.

A key assumption of Blatt's model is that these two personality types develop from early childhood experience are stable over time. Beck, in contrast suggests that a person can appear quite different depending on their current life circumstance. Studies investigating the congruency hypothesis tend to assume Blatt's perspective that these two personality types represent stable, enduring traits (Coyne and Whiffen, 1995). Coyne and Whiffen (1995) questioned whether the two personality styles outlined above are as stable and "trait-like" as suggested. They propose that a person could appear high on sociotropy/dependency at a time when they are in a troubled or dependency inducing interpersonal relationship. When in a more stable relationship they may not be elevated on this variable.

Blatt's asserts that these two personality styles emerge from quite different childhood experiences. This means it would be impossible for an individual to exhibit high levels of both traits. However research has typically revealed a proportion of participants who are high on *both* sociotropy/dependency *and* autonomy/self-criticism. An unexplainable occurrence, according to Blatt's model. To get around this problem, researchers have typically discarded these participants from the analysis (Coyne and Whiffen, 1995).

Measuring life events

There have been numerous calls for the advancement in the measurement of life events beyond the commonly used checklist or self-report measures. Checklists consist of lists of events with brief descriptions such as “an argument with someone close” or “divorce”. Endorsing an item gives no indication of the qualitative qualities of the event such as the magnitude of the event, how long the event went for, or whether the event was predicted or not. Qualities of events such as a magnitude, intensity, duration, unpredictability and novelty have all been found to influence depression onset

How to estimate the stressfulness of an event

Obviously not all events are equal in the impact they have on a person and it is useful to distinguish more stressful from less stressful events. A variety of methods have been used to estimate the magnitude of different life events.

Personal or subjective judgments

This is simply asking people “how stressful was that for you?” Using this approach in retrospective studies has been criticised because a person might rate an event as more stressful if they subsequently suffer emotional distress. They may not have rated the event as stressful in a prospective study (prior to knowing any of the emotional distress that might follow).

Contextual judgments of threat

Brown and Harris (1978) developed the technique of making “contextual judgements of threat” based on individual circumstances. Independent raters make a judgement of “expected stressfulness” of an event based on the detailed circumstances of the individual event occurrence, without knowing the participants subjective reaction to the event.

To do this a reasonable amount of information is needed about the circumstances surrounding an event. The ratings reflect what *most people* would be expected to feel about an event in a particular set of circumstances without knowing what the respondent says about his or her reaction or about any psychiatric symptoms.

Aims of the study

To examine the impact of current life circumstances on measures of personality “traits” and to follow this over time and observe any changes in “personality” based on changes in life circumstances.

To assess whether personality, as measured by the Depressive Experiences Questionnaire (DEQ), reflects a stable trait related to childhood attachment as predicted by Blatt’s theory.

To empirically test whether the way an individual classifies the events that happen in their lives is a function of the events or a function of their interpretation of events.

Initial Assessments

Summary of initial assessment

General Introduction	
Introductions (see page 11)	
Consent Form	5 minutes
Interview Measures	
Hamilton Rating Scale for Depression	10 minutes
Chronic Stress Interview	40 minutes
Participants go through Negative Experiences Questionnaire and identify which event occurred in the preceding six-month period.	5 minutes
Episodic Life Events Inventory	30-40 minutes ⁸⁹
Self-report Measures	
Episodic Life Events Inventory	
Sociotropy-Autonomy Scale	
Depressive Experiences Questionnaire	
Parental Bonding Instrument	
Beck Depression Inventory–second edition.	30 minutes
End of the assessment	
Thank you	
Contact and Payment Form.	5 minutes

- The length of interview varies from participant to participant and these times are approximations only.
- As the participant is filling out the questionnaires you will be able to write up your notes from the interview.

The Structured Interview

The structured interview part of the assessment is made up of the:

1. Hamilton Rating Scale for Depression
2. UCLA Life Stress Interview

Hamilton Rating Scale for Depression (Riskind, Beck, Brown & Steer 1987)

This is widely used and validated structured interview for depression with behaviorally specific anchor points for ratings to help with inter-rater reliability. It consists of 17 items that cover depressed mood, feelings of guilt, suicide, insomnia, work activities, retardation, agitation, anxiety, somatic symptoms, hypochondrias, insight and weight loss. Nine are rated on 5-point (0-4) scales and 8 are rated on 3-point (0-2) scales. Total scores range from 0-52. Generally a score of 14 or more is seen as indicating a level of depression justifying treatment.

⁸⁹ The length of the Episodic Life Events Inventory depends on the number of events that have occurred.

UCLA Life Stress Interview

The UCLA Life Stress Interview (Hammen et al. 1985)⁹⁰ is made up to two parts: The Episodic Life Events Inventory and The Chronic Stress Interview.

The Chronic Stress Interview

This structured interview assesses chronic, ongoing stress. It is divided into eight areas:

1. intimate relationship
2. close friendships
3. job
4. finances
5. relations with children
6. relations with extended family members
7. health of self
8. health of family member

The level of stress is rated on a 5-point scale, with each point behaviourally anchored with specific conditions. **This rating is made by the interviewer.**

The chronic stress probes cover the different areas of the person's life. In the process of eliciting information on about ongoing conditions, you ask if there have been specific events in each domain. If an event is determined to have occurred it is noted– and **at the conclusion of the chronic stress interview** these events are discussed during the Episodic Stress Interview.

Chronic conditions should be recorded on the chronic stress-rating sheet, making sufficient notes so that the basis of the rating score is apparent. Each set of behaviourally specific ratings is included in the interview attached. Note that the rating of “1” is rarely used; it applies to exceptionally positive conditions, whereas “2” refers to generally good conditions. Sometimes intermediate ratings (e.g., 2.5) may be used.⁹¹

The Episodic Life Events Inventory (ELEI).

The goal of the Episodic Stress Interview is to elicit not only the occurrence of stressors, but the surrounding circumstances in which they occur that may modify the understanding of their impact. There is a fairly lengthy list of topics to be discussed and a number of suggested probes. Interviewers are encouraged to follow two broad principles

1. To show curiosity about everything they are told and
2. To respond as much as possible to what is said as a story.

It is necessary to cover in as informal a way as possible a lengthy list of questions about what led up to and what followed events and the full set of circumstances surrounding the event. A certain hesitation in a reply should be followed by another question. The decision to stop asking questions is not so much settled by coming to the end of a list of standard questions, but by the feeling that the material makes sense or hangs together.

⁹⁰ Taken directly from the UCLA Life Stress Interview manual.

Episodic events and their circumstances are recorded in narrative form. All information about the dates and circumstances must be included, as the ratings will be done by a separate group. Any information concerning the subjects' actual reaction to the event must be excluded from the narrative forms.

An important element of this approach is that the rating of the events stressfulness or severity is made by an *independent rating team* at a team meeting.

Team meetings

The research team meets to rate the impact that an event would have on the average person. It is important that the team do not know the person's actual reaction to the event. These "objective" ratings of event impact are based on the knowledge of the event in its context, judged according to how much impact the event would have on a typical person under identical circumstances. This team also rates each event's "independence" of the person's behaviours or characteristics. For example, death of a family member is seen as an independent or fateful life event. Loss of job may be a dependent event.

Regular meetings are held that include at least two people (who did not perform the interview and do not know the subjects conditions or clinical status) plus the interviewer who presents the narrative and answers any questions that might arise that bear on the ratings. The interviewer, of course, may not reveal information about the subjects; state or reaction to the event. Two scores are given:

Objective impact, threat or severity.

Scored on a 5-point scale. Impact refers to how severe the threat or impact would be for the typical person under the same circumstances. Note: A minimum duration of the event's impact is not required, but duration would be factored in the score

1= no or minimal impact (these are usually excluded from analyses)

2= mild impact

3= significant impact (important but limited consequences)

4= marked impact (very stressful, many consequences or implications)

5= severe (the worst)

Independence

Scored on a 5-point scale. Refers to the extent to which the person's behaviour or characteristics contributed to the event's occurrence. Events are excluded if they refer to the person's illness, unless it has an adverse effect in and of itself. For instance, something like going to a new psychiatrist for medication might be excluded, but termination with a therapist with whom the person had a long-term relationship would be included.

1= entirely independent of the person ("fateful"; happens to someone else).

2= probably independent of the person

3= mixed, or indeterminate (most interpersonal events are in this category, given the joint contribution of both parties).

4= probably dependent on the person

5= entirely dependent on the person.

Self-report measures

Sociotropy and Autonomy Scale - Revised

The Sociotropy and Autonomy Scale –Revised (SAS - R, Clark et al., 1995) consists of two subscales: Sociotropy and Autonomy, which are similar to the subscales Dependency and Self-Criticism from the DEQ. Sociotropy focuses on interpersonal relationships. Items reflect concern with disapproval by others, and efforts to secure attachment to others. Autonomy. Items on this scale reflect achievement orientation, concern with the possibility of personal failure and maximisation of control over the environment.

Depressive Experiences Questionnaire

The Depressive Experiences Questionnaire (DEQ; Santor et al., 1997) is a 66 item self-report measure on which individuals' rate themselves on 7-point Likert-type items that were selected to assess a wide range of experience frequently associated with depression, but that are not in their own right symptoms of depression. It is made up of two factors. Dependency involves items that are primarily externally directed: that refer to interpersonal relationships and that concern abandonment, feeling lonely and helpless, and wanting to be close to, related to and dependent up on each other. Self-Criticism consists of items that are ore internally directed and concern feeling guilty, empty, hopeless, unsatisfied and insecure, pressured by responsibilities, threatened by change, ambivalent about oneself and others and critical toward the self for failing to meeting expectations and standards and assuming blame and responsibility.

Parental Bonding Instrument

The Parental Bonding Instrument (PBI; Parker, Tupling & Brown, 1979)is made up of two subscales: Care and Overprotection.

Care scale: These items measure presence or absence of care and defined one end of this scale as defined by affection, emotional warmth, empathy and closeness and the other by emotional coldness, indifference and neglect.

Overprotection scale: Items at one end of this scale measure control, overprotection, intrusion, excessive contact, and prevention of independent behaviour. The other end of this continuum is defined by items that measure allowance of independence and autonomy.

Beck Depression Inventory, Second Edition

The Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer & Brown, 1996) is an updated version of the Beck Depression Inventory (BDI; Beck, Rush, Shaw & Emery, 1979). The BDI-II was designed to fit more closely with the diagnostic criteria for depressive disorders (Diagnostic and Statistical Manual of Mental Disorders, DSM-IV, American Psychiatric Association, 1994). Like the original BDI, there are 21 items rated on a 4-point scale ranging from 0 to 3. Unlike the original, the time frame for the ratings has been changed from one to two weeks.

Negative Experiences Inventory

The Negative Experiences Inventory (NEI; Clark et al., 1992) is a life event measure designed to assess sociotropic and autonomous life events. Rather than just ticking off various events that have occurred, participants can indicate to what extend and in what way they were affected by the event.

Follow-up assessments

The follow-up assessments are the same as the initial assessments, EXCEPT that the Chronic Stress Interview is not administered. This reduces the time for the follow-up assessments by about 40 minutes compared to the initial assessments.

The format for the follow-up interviews is therefore:

General Introduction/re-introduction	
Introductions (see page 11)	
Consent Form	5 minutes
Interview	
Hamilton Rating Scale for Depression	10 minutes
<i>Life Events Inventory (tick box only)</i>	5 minutes
Episodic Stress Interview	30 minutes
Self-report Measures	
Life Events Inventory	
Sociotropy-Autonomy Scale	
Depressive Experiences Questionnaire	
Parental Bonding Instrument	
Beck Depression Inventory–second edition.	30 – 40 minutes
Close	
Thank you	
Contact and Payment Form.	5 minutes

- Again, length of interview is quite varied, depending on the experiences of the participant, and their speed at filling out the questionnaires. These time frames are meant as a guide only.
- As the participant is filling out the questionnaires you will be able to write up your notes from the interview.

Conducting the interviews

Arranging the meetings

Initial Data collection (Time 1).

You will be given a list of names of the people you will interview, along with their contact details.

Susan Watson will have:

1. Telephoned them having received the mailed BDI-II from them.
2. Arranged a time for the meeting
3. Posted a letter confirming day and time of the meeting and a map of where the clinic is.
4. Booked an interview room in the clinic.

NB. We use the word *meeting* not interview when speaking to participants in an aim to reduce anxiety for the participant.

Times for interviews

Interviews will mostly be scheduled to take place at the Psychology Clinic during working hours. Some interviews will take place after hours to accommodate participants who work. However, you should not be at the clinic with a participant on your own. It will be arranged so that there is always someone at least one other person at the Psychology Clinic.

NB. Under no circumstances must you be at the clinic with a participant on your own.

Interview format: First Interview (Time 1).

Introduction

- ☛ General greeting (e.g., find the clinic all right etc.)
- ☛ Introduce self (Part of the research team, headed by Susan Watson and Dr Ronan, you are in the final stages of training as a clinical psychologist)
- ☛ Thank them for taking the time to take part in the study. Very valuable contribution as we cannot do such research without people who are willing to give their time.
- ☛ The \$15 is just a token reimbursement and to cover travel costs.
- ☛ Re-iterate *"...as Susan would have told you over the phone, this study is being conducted over the period of a year. Our aim is to meet with people on three occasions over the next year. Again in 6 months time and then in 12 months time. If you move out of the area in that time it is possible for us to do telephone interviews if you would like to remain involved in the study"*
- ☛ *"Today we will spend about 2 hours together. Some of that time will be spent talking and for some of that time I will ask you to fill out a series of questionnaires. Each time we meet the procedure will be the same, although it will likely be briefer on the second and third meetings. (won't have to do the background, introductory stuff in the future)."*
- ☛ *I will guide our discussion and it will focus on specific areas on which we are conducting the research. I have an interview format here which I will be working my way through. This is necessary so that we can answer the research questions that we have. In order to get through the interview in two hours I may need to interrupt you at times and steer the conversation. .*
- ☛ *We will be talking mostly about current life circumstances, any ongoing stressors. The questionnaires cover similar topics but I will explain more about the questionnaires when we get to them. We will not be looking back and discussing people's distant pasts as the study is focussing on recent life circumstances.*

- Let them know that confidentiality is assured. (A written guarantee of this is in the Information Sheet).
- Give participant an Information Sheet and give them time to read it.
- Explain purpose for audiotaping and ask them if they agree to the audiotaping
- Ask them to sign the Consent Form

Interview format: Follow-up Interviews (Time 2 and Time 3).

Introduction

- General greeting (e.g., find the clinic all right etc.)
- Introduce self (Part of the research team, headed by Susan Watson and Dr Ronan, you are in the final stages of training as a clinical psychologist)
- Thank them for staying involved in the study. Very valuable contribution as we cannot do such research without people who are willing to give their time.
- The \$15 is just a token reimbursement and to cover travel costs.
- *"Today we will spend about one and a half hours together. The focus will be on catching up on the last six months and re-doing the same questionnaires as the previous two times. We will start though by discussing how you have been feeling emotionally over these last two weeks and then move to the life events that have happened in the last six months."*
- *I have an interview format here which I will be working my way through. This is necessary so that we can answer the research questions that we have. In order to get through the interview in time I may need to interrupt you at times and steer the conversation. I will be taking notes but all my papers are coded with a code number..*
- Let them know that confidentiality is assured. A written guarantee of this is in the Information Sheet.
- Give participant an Information Sheet and time to read it.
- Explain purpose for audiotaping and ask them if they agree to the audiotaping
- Ask them to sign the Consent Form.

Note

If people ask you about the study you cannot tell them too much at this stage as giving away the hypothesis introduces a risk of bias responding. However we will provide people with a summary of the results at the completion of the study if they would like. (They need to indicate this)

Payment

At the conclusion of the interview, give participants an envelope with \$15 dollars cash. They will need to sign that they received the cash. If they do not finish the interview for some reason or other they still receive payment.

You will be given a float from which to pay participants.

Put payment and contact forms in the file provided (filing cabinet in BC31)

Ethical, Safety and Professional Issues

Confidentiality

Confidentiality is assured to all participants and is an absolute requirement for the study. If you recognise the name of anyone with whom you are scheduled to interview, please let Susan Watson know immediately. All questionnaires are to be coded with a number, rather than people's names. Susan Watson and the actual interviewer are the only two people on the research team that will know the name of each participant.

Harm to interviewers

It may be that some part of the interview may be upsetting for interviewers, for example, particularly upsetting occurrences that happen in peoples lives. If you would like the opportunity to "debrief" or have some supervision following an upsetting interview Susan Watson is available to provide this. Please contact her as soon as possible to arrange a time. There will be regular times arranged to check in with Susan to discuss how the interviews are going.

Harm to participants

We have no reason to believe that the interview process will cause any harm to participants.

Identification of already depressed individuals

All participants in the study have already completed a BDI –II and been screened for the presence of depression. Therefore we are not expecting to identify people who are depressed at the first interview. However it is possible that this could happen. Because of possible recurrence of depression it is *likely* that *some* people will be depressed at the six-month and 12 month follow-ups.

In this instance it is important to remember that we are conducting an assessment interview for research purposes, not therapy. If people are willing and able to discuss the questions outlined in the interview just proceed in the normal way. If they become upset, be empathetic and understanding, just listen and direct. Reflection of feelings is helpful here, for example, "*I can see it's difficult for you to talk about that...*". Or "*I can see it's upsetting for you to think about that*".

If people become too upset to continue with the interview, than obviously you will stop the assessment process and focus on the client.

Remember that all these people have had at least one diagnosed episode of depression before so have sought help from some sort of health professional in the past. At the end of the interview you could ask them if they are planning to seek help and perhaps suggest that they do so, if they haven't already. Their GP is always a good place to start. If they are very upset you could ask them if there is anyone (family or friend) who they could perhaps talk about it with.

In very extreme cases (and we are not expecting this to happen) you could suggest they contact the Crisis Team, MidCentral Health. If you have concerns about a client's safety let Susan Watson know. If you cannot contact Susan Watson, there is usually a senior clinician in the Psychology clinic that you can talk to. Ask the client to sit and wait, perhaps offer them a cup of tea or coffee if appropriate and then seek supervision.

Professionalism

Each time you meet a participant you are representing Susan Watson and Dr Kevin Ronan, clinical psychology as a profession, and Massey University. It is important to remember professional standards of dress, punctuality and to have a professional manner.

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APPENDIX H – NEWSPAPER ADVERTISEMENTS AND NEWSPAPER ARTICLE

Study on Depression

We are researchers from Massey University studying depression. Our aim is to find out more about what causes depression.

We would like to talk with men and women who have experienced an episode of depression sometime in the last two years but who are not currently depressed. People taking part in the study will be given a token reimbursement of \$15 to compensate them for their time.

If you are interested in taking part or would like to know more, please contact Susan Watson during working hours on 350-5799 extension 2073.

Susan Watson Dr Kevin Ronan

 Massey University

EVENING STANDARD, WEDNESDAY, MAY 12, 1999 — 17

Depression study seeks volunteers

One hundred volunteers are needed for a Massey University study into what causes depression.

School of psychology senior clinical psychologist Susan Watson said trainee psychologists would interview the volunteers about their lives. They needed people who had been diagnosed as having had depression in the last two years but who were not depressed now.

Ms Watson said one in every five people would get depression at some time, so finding 100 people in Palmerston North should not be hard. They did not want those who had been diagnosed as having bipolar disorder, or post-natal depression.

People who suffered depression endured stigma for having a mental illness. Ms Watson said it seemed to be acceptable to society to suffer from broken bones, but lack of understanding meant people were sensitive about psychological issues. Volunteers so far had all said they wanted to de-stigmatise depression, and hoped what they told researchers would help others, she said.

Participating in the study would involve being interviewed for about two hours, three times in a year. Ms Watson guaranteed confidentiality. - NZPA

APPENDIX I – FLIERS PUT IN GENERAL PRACTITIONER OFFICES

Study on Depression

We are researchers from Massey University studying depression. Although it is often not talked about, depression is a common experience in New Zealand and in the rest of the world. In New Zealand about one in every seven people will experience depression at some stage during their lifetime. Our aim is to find out more about what causes depression.

We would like to talk with men and women who have experienced an episode of depression sometime in the last two years but who are not currently depressed. People taking part in the study will be given a token reimbursement of \$15 to compensate them for their time.

If you are interested in taking part or would like to know more, please contact Susan Watson during working hours on 350-5799 extension 2073.

Susan Watson

Dr Kevin Ronan



Massey University

APPENDIX J – INITIAL SCREENING QUESTIONNAIRE

Supplementary information

Sex

- ☐ Male
- ☐ Female

Age

_____ years

Marital status

- ☐ Married
- ☒ Defacto
- ☐ Single
- ☒ Widowed
- ☐ Divorced

Ethnic origin

- ☒ Pakeha
- ☒ Maori
- ☐ Pacific Island
- ☐ Other (Please specify _____)

Education

- ☒ Some high school
- ☐ Completed fifth form
- ☐ Completed sixth form

Yearly income

Nil
Less than \$10 000 per year
Between \$10 000 and \$20 000 per year
Between \$20 000 and \$35 000 per year
Between \$35 000 and \$50 000 per year
Over \$50 000 per year

Current employment

- ☐ Employed full time
- ☐ Employed part time
- ☐ Housewife/househusband
- ☐ Unemployed
- ☐ Full time student
- ☐ Part time student
- ☐ Retired

Usual occupation (Please specify)

Have you experienced a diagnosed episode of depression in the past ?

- ☐ Yes
- ☐ No

If so, when? ____ years ____ months ago

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure than you do not choose more than one statement for any group.

1. Sadness 0 I do not feel sad. 1 I feel sad much of the time. 2 I am sad all the time. 3 I am so sad or unhappy that I can't stand it. 2. Pessimism 0 I am not discouraged about my future. 1 I feel more discouraged about my future than I used to be. 2 I do not expect things to work out for me. 3 I feel my future is hopeless and will only get worse. 3. Past failure 0 I do not feel like a failure. 1 I have failed more than I should have. 2 As I look back, I see a lot of failures. 3 I feel I am a total failure as a person. 4. Loss of Pleasure 0 I get as much pleasure as I ever did from the things I enjoy. 1 I don't enjoy things as much as I used to. 2 I get very little pleasure from the things I used to enjoy. 3 I can't get any pleasure from the things I used to enjoy. 5. Guilty Feelings 0 I don't feel particularly guilty. 1 I feel guilty over many things I have done or should have done. 2 I feel quite guilty most of the time. 3 I feel guilty all of the time.	6. Punishment Feelings 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. Self-Dislike 0 I feel the same about myself as ever. 1 I have lost confidence in myself. 2 I am disappointed in myself. 3 I dislike myself. 8. Self Criticalness 0 I don't criticise or blame myself more than usual. 1 I am more critical of myself than I used to be. 2 I criticise myself for all of my faults. 3 I blame myself for everything bad that happens. 9. Suicidal Thoughts and Wishes 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. Crying 0 I don't cry any more than I used to. 1 I cry more than I used to. 2 I cry over every little thing. 3 I feel like crying, but I can't. 11. Agitation 0 I am no more restless or wound up than usual. 1 I feel more restless or wound up than usual. 2 I am so restless or agitated that it's hard to stay still. 3 I am so restless or agitated that I have to keep moving or doing something.
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12. Loss of Interest

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

13. Indecisiveness

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

14. Worthlessness

- 0 I do not feel I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as compared to other people.
- 3 I feel utterly worthless.

15. Loss of Energy

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

- 0 I have not experienced any change in my sleeping pattern.
- 1a I sleep somewhat more than usual.
- 1b I sleep somewhat less than usual.
- 2a I sleep a lot more than usual.
- 2b I sleep a lot less than usual.
- 3a I sleep most of the day.
- 3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

18. Changes in Appetite

- 0 I have not experienced any change in my appetite.
- 1a My appetite is somewhat less than usual.
- 1b My appetite is somewhat greater than usual.
- 2a My appetite is much less than before.
- 2b My appetite is much greater than usual.
- 3a I have no appetite at all.
- 3b I crave food all the time.

19. Concentration Difficulty

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than usual.
- 2 I am too tired or fatigued to do a lot of things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

APPENDIX K – DEPRESSIVE EXPERIENCES QUESTIONNAIRE, MCGILL REVISION

Instructions: Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree and to what extent. Circle the appropriate number.

- 1= Strongly Disagree
 2= Disagree
 3= Mildly Disagree
 4= Don't Know or Neutral
 5= Mildly Agree
 6= Agree
 7= Strongly Agree

1. I set my personal goals and standards as high as possible.	1	2	3	4	5	6	7
2. Without support from others who are close to me, I would be helpless.	1	2	3	4	5	6	7
3. I tend to be satisfied with my current plans and goals, rather than striving for higher goals.	1	2	3	4	5	6	7
4. Sometimes I feel very big, and other times I feel very small.	1	2	3	4	5	6	7
5. When I am closely involved with someone, I never feel jealous.	1	2	3	4	5	6	7
6. I urgently need things that only other people can provide.	1	2	3	4	5	6	7
7. I often find that I don't live up to my own standards or ideals.	1	2	3	4	5	6	7
8. I feel I am always making full use of my potential abilities.	1	2	3	4	5	6	7
9. The lack of permanence in human relationships doesn't bother me.	1	2	3	4	5	6	7
10. If I fail to live up to expectations, I feel unworthy.	1	2	3	4	5	6	7
11. Many times I feel helpless.	1	2	3	4	5	6	7
12. I seldom worry about being criticised for things I have said or done.	1	2	3	4	5	6	7
13. There is a considerable difference between how I am now and how I would like to be.	1	2	3	4	5	6	7
14. I enjoy sharp competition with others.	1	2	3	4	5	6	7

1= Strongly Disagree
 2= Disagree
 3= Mildly Disagree
 4= Don't Know or Neutral
 5= Mildly Agree
 6= Agree
 7= Strongly Agree

15. I feel I have many responsibilities that I must meet.	1	2	3	4	5	6	7
16. There are times when I feel "empty" inside.	1	2	3	4	5	6	7
17. I tend not to be satisfied with what I have.	1	2	3	4	5	6	7
18. I don't care whether or not I live up to what other people expect of me.	1	2	3	4	5	6	7
19. I become frightened when I feel alone.	1	2	3	4	5	6	7
20. I would feel like I'd be losing an important part of myself if I lost a very close friend.	1	2	3	4	5	6	7
21. People will accept me no matter how many mistakes I have made.	1	2	3	4	5	6	7
22. I have difficulty breaking off a relationship that is making me unhappy.	1	2	3	4	5	6	7
23. I often think about the danger of losing someone who is close to me.	1	2	3	4	5	6	7
24. Other people have high expectations of me.	1	2	3	4	5	6	7
25. When I am with others, I tend to devalue or "undersell" myself.	1	2	3	4	5	6	7
26. I am not very concerned with how other people respond to me.	1	2	3	4	5	6	7
27. No matter how close a relationship between two people is, there is always a large amount of uncertainty and conflict.	1	2	3	4	5	6	7
28. I am very sensitive to others for signs of rejection.	1	2	3	4	5	6	7
29. It's important for my family that I succeed.	1	2	3	4	5	6	7
30. Often, I feel I have disappointed others.	1	2	3	4	5	6	7

1= Strongly Disagree
 2= Disagree
 3= Mildly Disagree
 4= Don't Know or Neutral
 5= Mildly Agree
 6= Agree
 7= Strongly Agree

31. If someone makes me angry, I let him (her) know how I feel.	1	2	3	4	5	6	7
32. I constantly try, and very often go out of my way, to please or help people I am close to.	1	2	3	4	5	6	7
33. I have many inner resources (abilities, strengths).	1	2	3	4	5	6	7
34. I find it very difficult to say "No" to the request of friends.	1	2	3	4	5	6	7
35. I never really feel secure in a close relationship.	1	2	3	4	5	6	7
36. The way I feel about myself frequently varies: there are times when I feel extremely good about myself and other times when I see only the bad in me and feel like a total failure.	1	2	3	4	5	6	7
37. Often, I feel threatened by change.	1	2	3	4	5	6	7
38. Even if the person who is closest to me were to leave, I could still "go it alone".	1	2	3	4	5	6	7
39. One must continually work to gain love from another person: that is, love has to be earned.	1	2	3	4	5	6	7
40. I am very sensitive to the effects my words or actions have on the feelings of other people.	1	2	3	4	5	6	7
41. I often blame myself for things I have done or said to someone .	1	2	3	4	5	6	7
42. I am a very independent person.	1	2	3	4	5	6	7
43. I often feel guilty.	1	2	3	4	5	6	7
44. I think of myself as a very complex person, one who has "many sides".	1	2	3	4	5	6	7

1= Strongly Disagree
 2= Disagree
 3= Mildly Disagree
 4= Don't Know or Neutral
 5= Mildly Agree
 6= Agree
 7= Strongly Agree

45. I worry a lot about offending or hurting someone who is close to me.	1	2	3	4	5	6	7
46. Anger frightens me.	1	2	3	4	5	6	7
47. It is not "who you are", but "what you have accomplished" that counts.	1	2	3	4	5	6	7
48. I feel good about myself whether I succeed or fail.	1	2	3	4	5	6	7
49. I can easily put my own feelings and problems aside, and devote my complete attention to the feelings and problems of someone else.	1	2	3	4	5	6	7
50. If someone I cared about became angry with me, I would feel threatened that he (she) might leave me.	1	2	3	4	5	6	7
51. I feel comfortable when I am given important responsibilities.	1	2	3	4	5	6	7
52. After a fight with a friend, I must make amends as soon as possible.	1	2	3	4	5	6	7
53. I have a difficult time accepting weaknesses in myself.	1	2	3	4	5	6	7
54. It is more important that I enjoy my work than it is for me to have my work approved.	1	2	3	4	5	6	7
55. After an argument, I feel very lonely.	1	2	3	4	5	6	7
56. In my relationships with other, I am very concerned about what they can give to me.	1	2	3	4	5	6	7
57. I rarely think about my family.	1	2	3	4	5	6	7
58. Very frequently, my feelings toward someone close to me vary: there are times when I feel completely angry and other times when I feel all-loving towards that person.	1	2	3	4	5	6	7

- 1= Strongly Disagree
 2= Disagree
 3= Mildly Disagree
 4= Don't Know or Neutral
 5= Mildly Agree
 6= Agree
 7= Strongly Agree

59. What I do and say has a very strong impact on those around me.	1	2	3	4	5	6	7
60. I sometimes feel that I am "special".	1	2	3	4	5	6	7
61. I grew up in an extremely close family.	1	2	3	4	5	6	7
62. I am very satisfied with myself and my accomplishments .	1	2	3	4	5	6	7
63. I want many things from someone I am close to.	1	2	3	4	5	6	7
64. I tend to be very critical of myself.	1	2	3	4	5	6	7
65. Being alone doesn't bother me at all.	1	2	3	4	5	6	7
66. I very frequently compare myself to standards or goals.	1	2	3	4	5	6	7

APPENDIX L – SOCIOTROPY AND AUTONOMY SCALE, REVISED

Please indicate what percentage of the time each of the statements below applies to you by using the scale to the left of the items. Choose the percentage that comes closest to how often the item describes you. Mark your answer on the scoring sheet.

PERCENTAGE DESCRIBES YOU

0% 25% 50% 75% 100%

- | | | | | | | |
|---|---|---|---|---|----|---|
| A | B | C | D | E | 1. | I would be uncomfortable dining out in a restaurant by myself. |
| A | B | C | D | E | 2. | I get uncomfortable when I am not sure how I am expected to behave in the presence of other people. |
| A | B | C | D | E | 3. | I focus almost exclusively on the positive outcomes of my decisions. |
| A | B | C | D | E | 4. | It is important to be liked and approved of by others. |
| A | B | C | D | E | 5. | I feel more comfortable helping others than receiving help. |
| A | B | C | D | E | 6. | I am very uncomfortable when a close friend or family member decides to "pour their heart out" to me. |
| A | B | C | D | E | 7. | I am reluctant to ask for help when working on a difficult and puzzling task. |
| A | B | C | D | E | 8. | When I am with other people, I look for signs of whether or not they like being with me. |

0% 25% 50% 75% 100%

- | | | | | | | |
|---|---|---|---|---|-----|---|
| A | B | C | D | E | 9. | When visiting people, I get fidgety when sitting around talking and would rather get up and do something. |
| A | B | C | D | E | 10. | I am more concerned that people like me than I am about making important achievements. |
| A | B | C | D | E | 11. | I am afraid of hurting other people's feelings. |
| A | B | C | D | E | 12. | People rarely come to me with their personal problems. |
| A | B | C | D | E | 13. | I sometimes unintentionally hurt the people I love the most by what I say. |
| A | B | C | D | E | 14. | I feel bad if I do not have some social plans for the weekend. |
| A | B | C | D | E | 15. | I tend to be direct with people and say what I think. |

0% 25% 50% 75% 100%

- | | | | | | | |
|---|---|---|---|---|-----|--|
| A | B | C | D | E | 16. | People tend to dwell too much on their personal problems. |
| A | B | C | D | E | 17. | Once I've arrived at a decision, I rarely change my mind. |
| A | B | C | D | E | 18. | Being able to share experiences with other people makes them much more enjoyable for me. |
| A | B | C | D | E | 19. | I do things that are not in my best interest in order to please others. |
| A | B | C | D | E | 20. | I prefer to "work out" my personal problems by myself. |
| A | B | C | D | E | 21. | When I have a problem, I like to go off on my own and think it through rather than being influenced by others. |
| A | B | C | D | E | 22. | I find it hard to pay attention to a long conversation, even with friends. |
| A | B | C | D | E | 23. | I get lonely when I am home by myself at night. |
| A | B | C | D | E | 24. | The worst part about growing old is being left alone. |

0% 25% 50% 75% 100%

- | | | | | | | |
|---|---|---|---|---|-----|---|
| A | B | C | D | E | 25. | Having close bonds with other people makes me feel secure. |
| A | B | C | D | E | 26. | My close friends and family are too sensitive to what others say. |
| A | B | C | D | E | 27. | I am concerned that if people knew my faults or weaknesses they would not like me. |
| A | B | C | D | E | 28. | I set my own standards and goals for myself rather than accepting those of other people. |
| A | B | C | D | E | 29. | I worry that somebody I love will die. |
| A | B | C | D | E | 30. | If a goal is important to me I will pursue it even if it may make other people uncomfortable. |
| A | B | C | D | E | 31. | I find it difficult to say "no" to people. |
| A | B | C | D | E | 32. | I censor what I say because I am concerned that the other person may disapprove or disagree. |

0%	25%	50%	75%	100%	
A	B	C	D	E	33. I am usually the last person to hear that I've hurt someone by my actions.
A	B	C	D	E	34. I often find myself thinking about friends or family.
A	B	C	D	E	35. I would rather take personal responsibility for getting the job done than depend on someone else.
A	B	C	D	E	36. If a friend has not called for a while I get worried that he or she has forgotten me.
A	B	C	D	E	37. I spend a lot of time thinking over my decisions.
A	B	C	D	E	38. It is important to me to be free and independent.
A	B	C	D	E	39. People I work with often spend too much time weighing out the "pros" and "cons" before taking action.
A	B	C	D	E	40. When I am having difficulty solving a problem, I would rather work it out for myself than have someone show me the solution.
0%	25%	50%	75%	100%	
A	B	C	D	E	41. Often I fail to consider the possible negative consequences of my actions.
A	B	C	D	E	42. When I achieve a goal I get more satisfaction from reaching the goal than from any praise I might get.
A	B	C	D	E	43. If I think I am right about something, I feel comfortable expressing myself even if other's don't like it.
A	B	C	D	E	44. I am uneasy when I cannot tell whether or not someone I've met likes me.
A	B	C	D	E	45. If somebody criticises my appearance, I feel I am not attractive to other people.
A	B	C	D	E	46. I get uncomfortable around a person who does not clearly like me.
A	B	C	D	E	47. It is more important to be active and doing things than having close relations with other people.
A	B	C	D	E	48. Sometime I hurt family and close friends without knowing that I've done anything wrong.
A	B	C	D	E	49. I tend to fret and worry over my personal problems.

0%	25%	50%	75%	100%	
A	B	C	D	E	50. The possibility of being rejected by others for standing up for my rights would not stop me.
A	B	C	D	E	51. I need to be engaged in challenging tasks in order to feel satisfied with my life.
A	B	C	D	E	52. I don't enjoy what I am doing when I don't feel that someone in my life really cares about me.
A	B	C	D	E	53. I like to be certain that there is somebody close I can contact in case something unpleasant happens to me.
A	B	C	D	E	54. It would not be much fun for me to travel to a new place all alone.
A	B	C	D	E	55. I am more apologetic to others than I need to be.
A	B	C	D	E	56. I prize being a unique individual more than being a member of a group.
A	B	C	D	E	57. If I think somebody may be upset at me, I want to apologise.
A	B	C	D	E	58. I become particularly annoyed when a task is not completed.
A	B	C	D	E	59. I find it difficult to be separated from people I love.

APPENDIX M – CHRONIC STRESS INTERVIEW

(FROM THE UCLA LIFE STRESS INTERVIEW)

Chronic Stress Interview

Now I am going to move onto talking about your ongoing life circumstances. We will cover areas such as relationships, friendships, family, finances etc.

1. Intimate relationships

“The first area we are going to discuss is intimate relationships: Are you currently married or involved in a committed relationship?”

Yes/No (If no, skip to page 3)

If in a relationship:

“What is the relationship like?” or “How would you describe your relationship” or “How is your relationship going?”

Probes

Stability

Duration of relationship?

Have they ever broken up? If so, how many times? Why? How long?

Mutual Emotional Supportiveness

How close is participant with partner? (SUDS 1-10)

How much does participant confide in, disclose to partner?

How much does partner confide in, disclose to participant?

What kinds of things do participant and a partner do when one of them is feeling down?

Are these efforts at support mutual or one-sided?

Conflict resolution

About how often do participant and partner fight?

What kinds of things do they fight about?

What usually happens during one of their fights?

How do each of them usually behave during one of their conflicts?

Do they ever call each other names?

Do fights ever get physical?

About how long do fights usually last?

How do they end?

Rate: Intimate Relationships: (Circle appropriate number)

- 1 Exceptional intimate relationships- exceptional on all above quality factors, good conflict resolution ability
- 2 Stable, positive relationships – can adequately resolve conflicts, close, confiding trusting, reciprocal.
- 3 Some significant relationship problems (e.g., lacking greatly on 1 or 2 quality factors) but strong foundation to relationships.
- 4 Deteriorating relationship or severe problems (e.g., lacking greatly on 3 or more quality factors), more negative than positive, unstable, poor conflict resolution.
- 5 Abusive (physically and or emotionally) negative conditions, inability to trust, lack of communication, not reciprocal.

If not in a committed relationship**If dating**

How much?

How often?

How many people?

Quality of people

If not dating

How long since last relationship?

Lonely?

Wants relationships?

What steps is participant taking to meet a potential partner ?

Rate: If not in a committed relationship:

1. Frequent dating - participant perceives partners to be appropriate (excellent potential for future).
2. Some dating – participant perceives partners to be appropriate for future OR not dating but satisfied with being single, not feeling pressure to find a relationship/partner.
3. Some dating – partner/s is/are inappropriate OR not dating and not satisfied with being single, but no great pressure to find partner at the moment.
4. Some dating – perceive partners to be inappropriate for future and unable to find good prospects OR not dating, most friends are in a relationship; strongly desires relationships, lonely.
5. Not dating – No attempt or unsuccessful attempts to find partner, strongly wants relationship but prospects are poor.

2. Friendships

“Do you have close friends? How have these relationships been going?”

Probe**Quality**

Closeness

Confiding

Acceptance

Trust

Available

Dependable

Location (near by?)

Arguments

Reciprocal

How often speak to or see?

Rate: Friendships

1. Presence of an exceptionally high quality, close, confiding friendship – mutually satisfying reciprocal, good conflict resolution ability, mutual disclosure in many areas and comforting, mutual loyalty and trust, stable.
2. Presence of a good quality, close confiding friendship – mutual disclosure in some areas and comforting, can trust with most things, reciprocal, satisfying, and stable.
3. Presence of a close, confiding, friendship – although may be unstable at times, some trouble with conflict resolution OR presence of only a moderately close friendship that is fairly stable and non-conflictual.
4. Present of poor quality friendships – unstable, uncertain about trustworthiness, not reciprocal OR presence of only a moderately close friendships that is sometimes unstable or conflictual.
5. Absence of a close, confiding, friendship – no one they feel close to or confide in.

Have there been any (additional) events in the last year concerning close friends or social life?

E.g., friends moved away, major falling out, negative event happened to close friend, etc.

Family relationships (Family of origin/whanau).

“How is your relationship with your family going?”

Probe:

Quality (include all family members).

Close

Confiding

Trust

Acceptance

Frequency of contact

Frequency and nature of arguments

Communication

Available

Dependable

Rate: Family Relations

1. Exceptional quality relationship with all members of family – exceptional on all “quality” factors, good conflict resolution
2. Good quality relationship with at least some members – majority of “quality” factors are good, good conflict resolution.
3. Medium quality relationships but some problem in relationship with 1 parent (e.g., lack of communication, trust, availability etc...), other family members to turn to for support
4. Poor quality relationship with parents or others, significant problems (e.g., lacking in many “quality” factors), other family members to turn to for support.
5. Poor quality relationship with family, significant problem, no other family members to turn to.

4. Relationship with children

Closeness, extent of communication, effectiveness as parent?

Does the child confide in parent?

Frequency and quality of contact?

How well does the parent deal with the child, problem with child?

Rate: Relationship with children

1. Exceptional quality relationship with all members of family – exceptional on all “quality” factors, good conflict resolution
2. Good quality relationship with all members of family – exceptional on all “quality” factors, good conflict resolution.
3. Medium quality relationships but some problems in relationship with 1 parent (e.g., lack of communication, trust, availability etc. ...) other family members to turn to for support.
4. Poor parent-child relationship, lacking on most quality factors; significant parent-child conflict; poor monitoring and control OR potential for abuse or separation but family still intact.
5. Very poor relationship; unresolved major conflicts or abuse child separated from family to significant family problems.

“Any additional events happened concerning the family?”

e.g. Anyone left home, moved in? Death or injury? Major conflicts, fights/etc.

6. Work

“The next area is work. Are you working?” Yes/No

Probes

If working:

Working conditions – safe, clean, quiet

Work load – too much, too little, with your job description

Adequacy of rewards – stable income benefits, chance for advancement, raises, enough money

Relationships with boss, co-workers, quality feels appreciated

Length of time in job, type of job, general work history

If problems – assess other job options, offers.

Job stability

If not working

Reason for not working

Want a job?

Need a job?

Actively looking for a job?

Options

Has skills and interviewing skills?

Rate:

1. Exceptionally satisfying job in terms of all above areas.
Not working; home maker, retired or no need for job financially, extremely busy and satisfied with other activities and roles, has options if decides wants a job.
2. Stable job, good conditions, good rewards feel appreciated;
Not working; homemaker, retired between jobs, but satisfied, good prospects.
3. Significant problems in 1 or 2 of above, but positive aspects in other areas an/or other options;
Not working; needs and /or wants job, limited job and interview skills, actively looking with at least 1 good prospect; or not seeking at least one significant problem in current role.
4. Severe problems in 3-4 areas above threat of job low (either firing or quitting) limited options,
Not working; 2 or more negative features, few stress to resolve problems.
5. Chronic job instability – changing jobs often because unable to hold down job
Not working; impaired overwhelmed not functional in non-working role.

8. Finances

“Now I’d like to ask you about your family’s financial state”

Probe:

Can your family afford housing, clothing, food medical care, transportation, household items, leisure activities?

Does your family have enough money to pay bills?

Any outstanding debts, loans?

Rate: Finances

1. More than enough money for everything needed and wanted
2. Comfortable economically – can afford all things listed above, pay bills, save some money, may take budgeting to do so.
3. Enough money but requires careful planning and budgeting to make ends meet
4. Meager conditions but no physical hardships (enough food)
5. Hardships, poverty, lack of housing food, health care etc.

“Any additional evens concerning work or finances?”

Substantial debts incurred? Change jobs or working conditions? Significant failure or disappointment at work etc.

7. Health

"Next I'd like to ask you about your health and the health of your family members?"

*"Starting with **your** health"*

Probe:

We'll start with **physical illness** (in self) – looking for the presence of chronic or serious medical conditions.

Assess duration of problem,

Treatment required,

Resulting impairment,

Amount and type of care required,

Individual's responsibility in care taking

Coping resources,

"And now Psychiatric Illness (in self)"

Depression:

Age when had first episode

Frequency of episodes

Precipitants (life events happening prior to onset)

Severity

Past suicide attempts

Treatment history

Medication? (Check if still using medication. If so what medication? dose?)

Hospitalisations?

Psychotherapy?

Presence of mania (feeling like they're racing, racing thoughts, little need for sleep)
Other psychiatric illness?

Rate (Physical health)

1. Exceptionally good health, excellent physical shape.
2. Mild, typical problems that only sometimes require professional treatment (e.g. colds)
3. Significant chronic, but not life threatening problem that may cause mild impairment in job or activities (e.g. arthritis). May require some treatment but no long hospitalisations.
4. Significant potentially life threatening illness or condition requiring ongoing although not continuous treatment (uncontrolled diabetes)
5. Severe, life threatening or chronic disease or condition (e.g. Terminal cancer). Needs constraint care and treatment, person is severely disabled or almost completely impaired.

“And now the health of your family (include family of origin and children)

Probe:

Physical illness in family (looking for serious/chronic illness e.g., parent requires care following stroke, chronic asthma in child)

Assess duration of problem,

Treatment required,

Resulting impairment,

Amount and type of care required,

Individual's responsibly in care taking

Coping resources,

Psychiatric Illness (in family) Depression:

Age when had first episode

Frequency of episodes

Precipitants (life events happening prior to onset)

Severity

Past suicide attempts

Treatment history

Medication?

Hospitalisations?

Psychotherapy?

Presence of mania

Other psychiatric illness?**Rate (Physical health)**

- 1 Exceptional among all close relatives
- 2 Mild, typical problems that only sometimes require professional treatment (e.g. colds)
- 3 Significant health problems in close family member that is not life threatening but that causes impairment and may require long treatment or hospitalization. Individual may have some responsibility for care-taking
- 4 Severe, life threatening and chronic disease in immediate family member. Person needs extensive treatment, individual may have much care-taking responsibility
- 5 Terminal condition in close family member. Individual has much care taking responsibility

Any other health events not covered?

Accidents, death or illness of family or friends, personal injury of major illness

APPENDIX N – EPISODIC LIFE EVENTS INVENTORY
(FROM THE UCLA LIFE STRESS INTERVIEW)

ELEI Record Form (One per event)**Event Code** _____**Interviewer** _____**Date of Occurrence** _____**Description of Event:**

Determine the following information about each event

Date, what happened?, was event expected ?, was event desired ?, did subject have previous experience with the event ?, resources for coping with event ? (both tangible and emotional), Duration of event, how event changed the life of the participant ?

To what extent did this impact on your relationships with other people?

To what extent did this impact on your sense of achievement?

Negative Impact/Stress ?

Rating made by interviewer

Interviewer Rating of Independence

1	2	3	4	5
almost completely independent		mixed		almost completely dependent

Ratings made by research team during team meeting

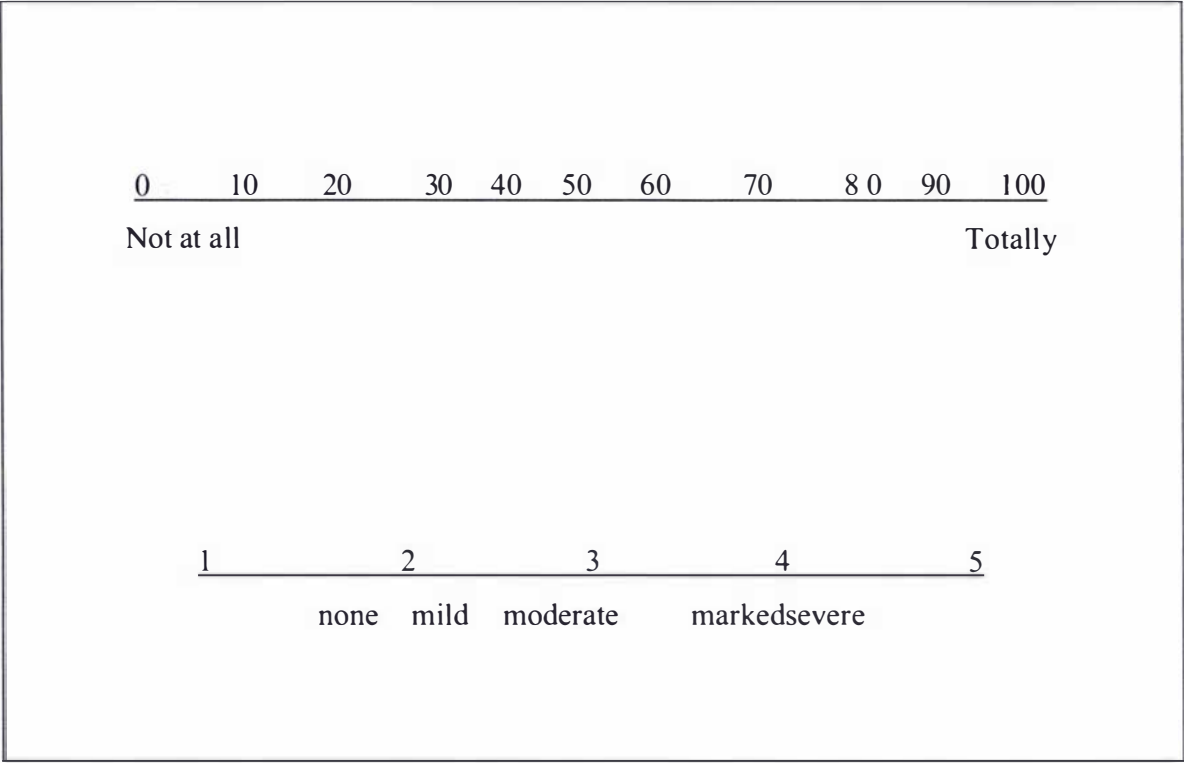
Team Objective Rating of Negative Impact/Stress:

1 2 3 4 5

Team Rating of Independence

<u>1</u>	2	3	4	<u>5</u>
almost		mixed		almost
completely				completely
independent				dependent

(This 0 – 100 scale was laminated on a card, and given to participants to view when making judgments)



Hammen Life Event Interview

GUIDELINES FOR INTERVIEWERS:

After asking each probe, determine the following information about the event:

- date
- what happened
- was event desired
- did subject have previous experience with the event
- resources for coping with event (tangible and emotional)
- duration of event

In general, get a sense of how the event changed the person's life or any circumstances that may modify event's impact and consequences.

DO NOT ask subject about emotional states or symptoms. If subject provides this information, note it parenthetically on the event sheet.

Events which are logically dependent on one another should be considered one event.

Events which are typical of an ongoing strain should be rated in the chronic stress interview unless they represent a significant exacerbation of change in a chronic stress.

Events which do not have the impact of at least one week, or do not seem important to the subject should not be included. IF IN DOUBT, COLLECT THE INFORMATION AND THE RATING TEAM WILL MAKE A DECISION IF THE EVENT SHOULD BE INCLUDED.

HINTS TO THE INTERVIEWER:

If the subject is not understanding what you mean by specific events, give them an example. You want to be sure they understand that we are talking about individual events, not just the general state of their existence. Do NOT ask them to report "stressful" events as their idea of stressful may be idiosyncratic, the rating team decides what is stressful and what is not.

Some subjects may not be able to generate many (or any) events. You really want to prove them. See if you can jog their memory, but don't push too far. On the other hand, some subjects may go on forever. You will probably need to gently cut them off if they start to ramble.

You don't need to go through the probes in order provided.

RATINGS during the interview:

- Subjective threat rating: describe the scale to the subject and have them rate the extent of negative impact/stressfulness.
- Objective threat rating: team makes this rating.
- Interviewer rating of independence: Interviewer makes this rating. An event whose occurrence is due to the subject's personality or symptoms is considered dependent. The notion is that the subjects had some role in, or caused the occurrence of the event. An independent event is one in which the subject had no part (e.g., death of someone – assuming they didn't cause death). Interpersonal conflict events (e.g., arguments) are typically rated as a "3" unless it is CLEAR that is otherwise
- Team rating of independence: team makes this rating.

INTRODUCTION TO LIFE EVENT INTERVIEW:

You may want to say something like:

"Last time I asked you about different areas of your life in a broad or general way to get a sense about what goes on for you, and what may be stressful in your life. I'll be asking you about that, again, but first I want to ask you more specifically about particular events that may have happened to you since the last time we met. The last time we met was _____. Has anything significant happened in your life that you can think of off the top of your head?"

PROBES:

Work

Have you been working since we last spoke? Have you changed jobs?, Have work conditions, hours responsibilities changed?, Have you been promoted, given a raise, fired, stopped working? Any troubles with boss or co-workers?

School

Are you in school?, Changed schools?, Stopped school?, Any failures?, Any important exams, awards?

Health

Have you experienced any changes in your health or your family's health?, Illnesses, injuries, accidents, pregnancies, assaults?

Bereavement

Has anyone close to you passed away since we last spoke? Family member, friend, pet? Loss of anything important?, Robbery?

Migration

Have you moved?, From where to where?, Logistics of move?, Afford to move?

Romantic Relationships

Have you had any changes in your romantic relationships?

Began or ended a relationship? Engagement, marriage, affairs? Cohabitation? Major arguments, improvements?.

Family/Friends

Have you experienced any changes in your family or with close friends? Improvements in relationships? Major arguments or problems? New Roommate or friend? Births, adoptions, New person in home? Engagements, marriages? Separations from family or friends?

Legal

Have you had any legal trouble or been involved in any legal problems? Personal troubles or troubles with family members?

Financial

Any changes in your financial state? Significant increases, decreases?

Other

Has any other event happened to you since we last spoke?

APPENDIX O – NEGATIVE EXPERIENCES QUESTIONNAIRE

Check if event occurred in past 6 months		Generally upsetting How upsetting was this event?					Loss of Relationship How much did this event result in a loss of closeness, acceptance or support from others?					Loss of Goals How much did this event result in a loss of your independence, freedom or goals?				
		Not at all	Mildly	Moderately	Severely	Extremely	Not at all	Mildly	Moderately	Severely	Extremely	Not at all	Mildly	Moderately	Severely	Extremely
☐	<u>WORK</u> Fired from job	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☒	Made redundant	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Quit job	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Became unemployed	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Work evaluation was unsatisfactory	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☒	Retired	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☒	Job demotion	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☒	Suspended from job	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Changed jobs for a worse one	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)

		Generally Upsetting	Loss of Relationship	Loss of Goals
		How upsetting was this event?	How much did this event result in a loss of closeness, acceptance or support from others?	How much did this event result in a loss of your independence, freedom or goals?
☐	Did not get expected promotion	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Suffered a business loss or failure	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Increase in job responsibilities	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Too many hassles on job	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☒	Serious argument with co-worker or boss	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Promoted	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤

Check if
event
occurred in
past
6 months

STUDY

		Not at all	Mildly	Moderately	Severely	Extremely		Not at all	Mildly	Moderately	Severely	Extremely		Not at all	Mildly	Moderately	Severely	Extremely
☐	Quit course/training programme	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)
☐	Started a new course/training programme	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)
☐	Changed course/training programme	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)
☒	Failed a course or training programme	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)
☐	Did much worse than expected in course/training programme.	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)
☐	Serious difficulties with course/training programme authorities	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)
☐	Serious argument with classmate	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)
☒	Graduated from course/training programme	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)
☐	Changed course for a worse one	(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)		(1)	(2)	(3)	(4)	(5)

Check if event occurred in past 6 months	<u>PHYSICAL HEALTH</u>	Generally Upsetting How upsetting was this event?	Loss of Relationship How much did this event result in a loss of closeness, acceptance or support from others?	Loss of Goals How much did this event result in a loss of your independence, freedom or goals?
		Not at all Mildly Moderately Severely Extremely	Not at all Mildly Moderately Severely Extremely	Not at all Mildly Moderately Severely Extremely
☐	Onset or worsening of physical disability	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☒	Major surgery	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Serious physical illness requiring medical treatment	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☒	Sudden and serious impairment of vision or hearing	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Abortion for self or partner	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☒	Partner or self started menopause	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Discovered could not have children	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☒	Miscarriage or stillbirth	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)

Check if event occurred in past 6 months	<u>LOVE AND MARRIAGE</u>	Generally Upsetting How upsetting was this event?	Loss of Relationship How much did this event result in a loss of closeness, acceptance or support from others?	Loss of Goals How much did this event result in a loss of your independence, freedom or goals?
		Not at all Mildly Moderately Severely Extremely	Not at all Mildly Moderately Severely Extremely	Not at all Mildly Moderately Severely Extremely
☐	Spouse/partner died	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Onset or worsening serious illness in spouse/partner	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Discovered spouse/partner was abusing drugs or alcohol	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Got divorced	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Separated from spouse	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Broke up with steady boyfriend/girlfriend	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Engagement was broken	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Discovered spouse/partner had an affair	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Spouse/partner discovered you had an affair	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)

If event occurred in past 6 months		Generally Upsetting How upsetting was this event?					Loss of Relationship How much did this event result in a loss of closeness, acceptance or support from others?					Loss of Goals How much did this event result in a loss of your independence, freedom or goals?				
		<i>Not at all</i>	<i>Mildly</i>	<i>Moderately</i>	<i>Severely</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Mildly</i>	<i>Moderately</i>	<i>Severely</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Mildly</i>	<i>Moderately</i>	<i>Severely</i>	<i>Extremely</i>
	<u>LOVE AND MARRIAGE</u>															
☒	Break up of an affair	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Spouse/partner started work after not working for a while	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Spouse/partner stopped work	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Spouse/partner made an unsuccessful suicide attempt	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Spouse/partner committed suicide	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Spouse/partner was sent to prison	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☒	Serious argument with spouse/partner	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Got married	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☒	Got engaged	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)

Check if event occurred in past 6 months		Generally Upsetting How upsetting was this event?					Loss of Relationship How much did this event result in a loss of closeness, acceptance or support from others?					Loss of Goals How much did this event result in a loss of your independence, freedom or goals?				
		<i>Not at all</i>	<i>Mildly</i>	<i>Moderately</i>	<i>Severely</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Mildly</i>	<i>Moderately</i>	<i>Severely</i>	<i>Extremely</i>	<i>Not at all</i>	<i>Mildly</i>	<i>Moderately</i>	<i>Severely</i>	<i>Extremely</i>
☐	<u>CHILDREN</u> Child died	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Onset or worsening of serious illness in child	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Discovered child was abusing drugs or alcohol	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Son or daughter left home	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Onset or worsening of behavioural problems in children	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Birth of a child	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
☐	Child got married	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)

Check if event
occurred in
past
6 months

CHILDREN cont...

- ☐ Child made unsuccessful
suicide attempt
- ☐ Child committed suicide
- ☐ Child sent to prison
- ☐ Serious argument with child

Generally Upsetting
How upsetting was this
event?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Relationship
How much did this event
result in a loss of
closeness, acceptance or
support from others?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Goals
How much did this
event result in a loss
of your
independence,
freedom or goals?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

If event occurred in past 6 months	<u>OTHER FAMILY MEMBERS</u>	Generally Upsetting How upsetting was this event?	Loss of Relationship How much did this event result in a loss of closeness, acceptance or support from others?	Loss of Goals How much did this event result in a loss of your independence, freedom or goals?
		<i>Not at all</i> <i>Mildly</i> <i>Moderately</i> <i>Severely</i> <i>Extremely</i>	<i>Not at all</i> <i>Mildly</i> <i>Moderately</i> <i>Severely</i> <i>Extremely</i>	<i>Not at all</i> <i>Mildly</i> <i>Moderately</i> <i>Severely</i> <i>Extremely</i>
☐	Family member died	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Onset or worsening of serious illness in family member	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Family member required continuous care from you	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Discovered family member was abusing drugs or alcohol	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Family member made unsuccessful suicide attempt	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Family member committed suicide	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤
☐	Family member sent to prison	① ② ③ ④ ⑤	① ② ③ ④ ⑤	① ② ③ ④ ⑤

Check if
event
occurred in
past
6 months

OTHER FAMILY MEMBERS

☐ Serious argument with family member

☐ Family member moved out of the household

☐

±

☐

±

Generally Upsetting
How upsetting was this event?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Relationship
How much did this event result in a loss of closeness, acceptance or support from others?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Goals
How much did this event result in a loss of your independence, freedom or goals?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Check if
event
occurred in
past
6 months

SOCIAL ACTIVITIES

☐ Unable to take planned vacation

☐ Pet died

☐ Broke up with a close friend

☐ Close friend died

☐ Close friend moved away

☒ Onset or worsening of serious
physical illness in close friend

☐ Serious argument with close friend

☐ Developed a close friendship

Generally Upsetting

How upsetting was
this event?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Relationship

How much did this
event result in a loss
of closeness,
acceptance or support
from others?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Goals

How much did this
event result in a loss
of your
independence,
freedom or goals?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Check if
event
occurred in
past
6 months

FINANCES

☐ Major financial difficulties

☐ Got into debt over ability to repay

☐ Foreclosure of mortgage

☒ Took a cut in wage or salary

☐ Suffered a property loss

☐ Repossession of a car, furniture or
other items bought on an instalment
plan

☐ Went on welfare

☐ Did not get an expected wage or
salary increase

Generally Upsetting
How upsetting was
this event?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Relationship
How much did this
event result in a loss
of closeness,
acceptance or support
from others?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Goals
How much did this
event result in a loss
of your
independence,
freedom or goals?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Check if event occurred in past 6 months	CRIME AND LEGAL MATTERS	Generally Upsetting	Loss of Relationship	Loss of Goals
		How upsetting was this event?	How much did this event result in a loss of closeness, acceptance or support from others?	How much did this event result in a loss of your independence, freedom or goals?
		Not at all Mildly Moderately Severely Extremely	Not at all Mildly Moderately Severely Extremely	Not at all Mildly Moderately Severely Extremely
☐	Physically assaulted	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Convicted of a minor violation or misdemeanour (e.g., speeding)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Convicted of a major crime	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Sentenced to jail	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Involved in physical fight	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Robbed	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Had a court appearance	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)

☐	Lost a law suit	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Accused of something for which a person could be sent to jail	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Drivers license was revoked	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	Didn't get out of jail when expected	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)
☐	_____.	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)	(1) (2) (3) (4) (5)

Check if
event
occurred in
past
6 months

RESIDENCE

- ☐ Moved to a new residence
- ☐ Lost a home through fire, flood or other disaster
- ☐ Renovated a home
- ☐ Built a home or had one built
- ☐ _____

Generally Upsetting

How upsetting was this event?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Relationship

How much did this event result in a loss of closeness, acceptance or support from others?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

Loss of Goals

How much did this event result in a loss of your independence, freedom or goals?

Not at all
Mildly
Moderately
Severely
Extremely

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

(1) (2) (3) (4) (5)

APPENDIX P – TAXONOMY OF SOCIOTROPIC AND AUTONOMOUS EVENTS (CLARK, PERSONAL COMMUNICATION, 2001)

Sociotropic Events from the Negative Experiences Questionnaire (NEQ)

STUDY subscale

Serious argument with classmate

PHYSICAL HEALTH Subscale

Abortion for self or partner

Discovered could not have children

Miscarriage or stillbirth

LOVE AND MARRIAGE Subscale

Spouse/partner died

Discovered spouse/partner was abusing drugs or alcohol

Got divorced

Separated from spouse

Broke up with a steady boyfriend/girlfriend

Engagement was broken

Discovered spouse/partner had an affair

Spouse/partner discovered you had an affair

Break up of an affair

Spouse/partner started work after not working for a while

Spouse/partner made unsuccessful suicide attempt

Spouse/partner committed suicide

Spouse/partner was sent to prison

Got married

Got engaged

CHILDREN Subscale

Child died

Onset or worsening of serious illness in child

Discovered child was abusing drugs or alcohol

Son or daughter left home

Onset or worsening of behavioural problems in child

Birth of a child

Child got married

Child made unsuccessful suicide attempt

Child committed suicide

Child sent to prison

Serious argument with child

OTHER FAMILY MEMBERS Subscale

Family member died
Discovered family member was abusing drugs or alcohol
Family member made unsuccessful suicide attempt
Family member committed suicide
Family member sent to prison
Serious argument with family member
Family member moved out of the household

SOCIAL ACTIVITIES Subscale

Pet died
Broke up with close friend
Close friend died
Close friend moved away
Onset or worsening of serious physical illness in close friend
Serious argument with close friend
Developed a close friendship

Autonomous Events from the Negative Experiences Questionnaire**WORK subscale**

Fired from job
Laid off
Quit Job
Became unemployed
Work evaluation was unsatisfactory
Retired
Job demotion
Suspended from job
Changed job for a worse one
Did not get expected promotion
Suffered a business loss or failure
Increase in job responsibilities
Too many hassles on job
Promoted

STUDY subscale

Quit course/training programme
Started a new course/training programme
Changed course/training programme
Failed a course/training programme
Did much worse than expected in course/training programme
Graduated from course/training programme

PHYSICAL HEALTH subscale

Onset or worsening of physical disability
Major surgery
Serious physical illness requiring medical treatment
Sudden serious impairment of vision or hearing

FINANCES subscale

Major financial difficulties
Got into debt over ability to repay
Foreclosure of mortgage
Took a cut in wage or salary
Suffered a property loss
Repossession of a car, furniture or other items bought on an instalment plan
Went on welfare
Did not get an expected wage or salary increase.

CRIME AND LEGAL MATTERS subscale

Convicted of a minor violation or misdemeanour (eg, speeding)
Convicted of a major crime
Sentenced to jail
Robbed
Had a court appearance
Lost a law suit
Accuse of something for which a person could be sent to jail
Drivers licence was revoked
Didn't get out of jail when expected

RESIDENCE subscale

Renovated a home
Built a home or had one built

APPENDIX Q – HAMILTON RATING SCALE FOR DEPRESSION

I'd like to ask you some questions about the past week. How have you been feeling since last (day or week)?

What's your mood been like the past week?

Have you been feeling down or depressed?

Depressed mood (sadness, hopeless, helpless, worthless):

- 0 – absent
- 1 – indicated
- 2 – spontaneously reported verbally
- 3 – communicated non-verbally
- 4 – virtually only: this in spontaneous verbal and non-verbal communication

In the last week, how often have you felt (own equivalent)? Everyday? All day?

If scored 1-4 above ask: How long have you been feeling this way?

Have you been especially critical of yourself this past week, feeling you've done things wrong or let others down?

Feelings of guilt:

- 0 - absent
- 1 - self reproach, feels s/he has let people down
- 2 - ideas of guilt or rumination over past errors or sinful deeds
- 3 - present illness is a punishment
- 4 - hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations.

If yes: In what way? Name your thoughts. Have you been feeling guilty about anything that you've done?

Have you thought that you've brought (This major depressive disorder) on yourself?

Suicide:

- 0 - absent
- 1 - feels life is not worth living
- 2 - wishes s/he was dead or any thoughts of possible death
- 3 - suicidal ideas or gestures
- 4 - attempts at suicide

During this past week have you had any thoughts that life is not worth living, or that you'd be better off dead? What about having thoughts of hurting or even killing yourself?

If yes: What have you thought about? Have you actually done anything to hurt yourself?

How have you been sleeping over the last week?

Have you had any trouble falling asleep at the beginning of the night? (Right after you go to bed, how long has it been taking you to fall asleep?)

How many nights this week have you had trouble falling asleep?

During the past week, have you been waking up in the middle of the night?

If yes: do you get out of bed? What do you do? (Only go to the bathroom?)

When you get back in bed, are you able to fall right back asleep?

Have you felt your sleeping has been restless or disturbed some nights?

What time have you been waking up in the morning for the last time, this past week?

If early: Is this with an alarm clock or do you just wake yourself? What time do you usually wake up (this is before you got depressed?)

Insomnia early:

- 0 – no difficulty falling asleep
- 1 – complains of occasional difficulty falling asleep (i.e. more than 1/2 an hour)
- 2 – complains of nightly difficulty falling asleep

Insomnia middle:

- 0 – no difficulty falling asleep
- 1 – complains of being restless and disturbed during the night
- 2 – waking during the night – any getting out of bed (except to void)

Insomnia late:

- 0 – no difficulty falling asleep
- 1 – waking in early hours of morning but goes back to sleep
- 2 – unable to fall asleep again if gets out of bed

How have you been spending your time this past week (when not at work)?

Work and Activities:

- 0 – no difficulty
- 1 – thoughts and feelings of incapacity, fatigue or weakness related to activities, work or hobbies
- 2 – loss of interest in activities, hobbies or work by direct report of the person or indirect in listlessness, indecision and vacillating (feels s/he has to push self to

work or activities)

- 3 – decrease in actual time spent in activities or decrease in activities (hospital job or hobbies)
 - stopped working because of present illness. In hospital no activities except ward chores, or fails to perform ward chores unassisted.

Have you ever felt interested in doing (those things) or do you feel you have to push yourself to do them?

Have you stopped doing anything you used to do?
If yes: Why?

Retardation: (slowness of thought and speech: impaired ability to concentrate;; decreased motor activity):

- 0 – normal speech and thought
 1 – slight retardation at interview
 2 – obvious retardation at interview
 3 – interview difficult
 4 – complete stupor

s there anything you look forward to?

(At follow up: **Has your interest been back to normal?**)

Rating based on observation during interview

Have you been feeling especially tense or irritable this past week?

Agitation:

- 0 – none
 1 – fidgetiness
 2 – playing with hands, hair etc.
 3 – moving about, can't sit still
 4 – hand-wringing, nail biting, hair pulling biting of lips

Anxiety psychic:

- 0 – no difficulty
 1 – subjective tension and irritability
 2 – worrying about minor matters
 3 – apprehensive attitude apparent in face of speech
 4 – fears expressed without questioning

Have you been worrying a lot about little un-important things, things you wouldn't ordinarily worry about?

If yes: **Like what for example**

In the last week have you had any of these physical symptoms? Read list adjacent, pausing after each section for reply.	Anxiety somatic: Physiological concomitants of Anxiety, such as: <i>Gastro-intestinal:</i> dry mouth, gas, indigestion, diarrhoea, cramps, belching <i>Cardio vascular:</i> heart palpitations, headaches <i>Respiratory:</i> hyperventilating, sighing, having to urinate frequently, sweating
How much have these things been bothering you this past week? (How bad have they been? How much of the time, or how often, have you had them?)	0 – absent 1 – mild 2 – moderate 3 – severe 4 - incapacitating
How has your appetite been this past week? (What about compared to your usual appetite?) Have you forced yourself to eat? Have other people urged you to eat?	Somatic symptoms Gastrointestinal: 0 – absent 1 – loss of appetite but eating without encouragement 2 – difficulty eating without urging –
How has your energy been this past week? Have you been tired all the time? This week, have you had any backaches, headaches, or muscle aches?	Somatic Symptoms General: 0 – none 1 – heaviness in limbs, back or head – loss of energy and feeling fatigued 2 – any clear cut symptoms
How has your interest in sex been this week? (I'm not asking about performance, but about your interest in sex – how much do you think about it)	1 Mild 2 severe

Has there been any change in your interest in sex (from when you were not depressed)?

Is it something you've thought much about?
If not: **Is that unusual for you?**

In the past week, how much have your thoughts been focused on your physical health or how your body is working (compared to your normal thinking)?

Do you complain much about how you feel physically?

Have you found yourself asking for help with things you could really do yourself?

If yes: **Like what, for example? How often has that happened?**

Rating based on observation

Have you lost any weight since this (Major Depressive Disorder) began?

If yes: How much?

If not sure: **Do you think your clothes are any looser on you?**

Hypochondriasis:

- 0 – not present
- 1 – self-absorption (bodily)
- 2 – preoccupation with health
- 3 – frequent complains, requests
- 4 – hypochondriacal delusions

Insight:

- 0 – acknowledges being depressed and ill or not currently depressed
- 1 – acknowledged illness but attributes cause to bad food, climate, overwork, virus, need for rest, etc.
- 2 – denies being ill

Loss of weight

- 0 – no weight loss
- 1 – probably weight loss associated with present illness
- 2 – definite (according to point) weight loss
- 3 – not assessed

At follow up: **Have you gained the weight back?**

Additional comments

Generally a score of:

- 14 or more (out of a total possible score of 50) is seen as indicating a level of depression justifying treatment,
- or less as indicating remission.

APPENDIX R – BECK DEPRESSION INVENTORY, SECOND EDITION

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure than you do not choose more than one statement for any group.

1. Sadness 0 I do not feel sad. 1 I feel sad much of the time. 2 I am sad all the time. 3 I am so sad or unhappy that I can't stand it. 2. Pessimism 0 I am not discouraged about my future. 1 I feel more discouraged about my future than I used to be. 2 I do not expect things to work out for me. 3 I feel my future is hopeless and will only get worse. 3. Past failure 0 I do not feel like a failure. 1 I have failed more than I should have. 2 As I look back, I see a lot of failures. 3 I feel I am a total failure as a person. 4. Loss of Pleasure 0 I get as much pleasure as I ever did from the things I enjoy. 1 I don't enjoy things as much as I used to. 2 I get very little pleasure from the things I used to enjoy. 3 I can't get any pleasure from the things I used to enjoy. 5. Guilty Feelings 0 I don't feel particularly guilty. 1 I feel guilty over many things I have done or should have done. 2 I feel quite guilty most of the time. 3 I feel guilty all of the time. 6. Punishment Feelings 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. Self-Dislike 0 I feel the same about myself as ever. 1 I have lost confidence in myself. 2 I am disappointed in myself. 3 I dislike myself. 8. Self Criticalness 0 I don't criticise or blame myself more than usual. 1 I am more critical of myself than I used to be. 2 I criticise myself for all of my faults. 3 I blame myself for everything bad that happens. 9. Suicidal Thoughts and Wishes 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. Crying 0 I don't cry any more than I used to. 1 I cry more than I used to. 2 I cry over every little thing. 3 I feel like crying, but I can't. 11. Agitation 0 I am no more restless or wound up than usual. 1 I feel more restless or wound up than usual. 2 I am so restless or agitated that it's hard to stay still. 3 I am so restless or agitated that I have to keep moving or doing something.
--	--

12. Loss of Interest

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

13. Indecisiveness

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

14. Worthlessness

- 0 I do not feel I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as compared to other people.
- 3 I feel utterly worthless.

15. Loss of Energy

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

- 0 I have not experienced any change in my sleeping pattern.
- 1a I sleep somewhat more than usual.
- 1b I sleep somewhat less than usual.
- 2a I sleep a lot more than usual.
- 2b I sleep a lot less than usual.
- 3a I sleep most of the day.
- 3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

18. Changes in Appetite

- 0 I have not experienced any change in my appetite.
- 1a My appetite is somewhat less than usual.
- 1b My appetite is somewhat greater than usual.
- 2a My appetite is much less than before.
- 2b My appetite is much greater than usual.
- 3a I have no appetite at all.
- 3b I crave food all the time.

19. Concentration Difficulty

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than usual.
- 2 I am too tired or fatigued to do a lot of things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

APPENDIX S – PARENTAL BONDING INSTRUMENT (QUESTIONS 1–25) AND MEASURE OF PARENTING STYLE (QUESTIONS 26–30)

Instructions: **Please circle the most appropriate number that best describes your MOTHER or MOTHER FIGURE as you remember her in your first 16 years of life.**

	Very like	Moderately like	Moderately unlike	Very unlike
1. Spoke to me with a warm and friendly voice	1	2	3	4
2. Did not help me as much as I needed	1	2	3	4
3. Let me do those things I liked doing	1	2	3	4
4. Seemed emotionally cold to me	1	2	3	4
5. Appeared to understand my problems and worries	1	2	3	4
6. Was affectionate to me	1	2	3	4
7. Liked me to make my own decisions	1	2	3	4
8. Did not want me to grow up	1	2	3	4
9. Tried to control everything I did	1	2	3	4
10. Invaded my privacy	1	2	3	4
11. Enjoyed talking things over with me	1	2	3	4
12. Frequently smiled at me	1	2	3	4
13. Tended to baby me	1	2	3	4
14. Did not seem to understand what I needed or wanted	1	2	3	4
15. Let me decide things for myself	1	2	3	4
16. Made me feel I wasn't wanted	1	2	3	4
17. Could make me better when I was upset	1	2	3	4
18. Did not talk with me very much	1	2	3	4
19. Tried to make me dependent on her	1	2	3	4

	Very like	Moderately like	Moderately unlike	Very unlike
20. Felt I could not look after myself unless she was around	1	2	3	4
21. Gave me as much freedom as I wanted	1	2	3	4
22. Let me go out as often as I wanted	1	2	3	4
23. Was overprotective of me	1	2	3	4
24. Did not praise me	1	2	3	4
25. Let me dress in any way I pleased	1	2	3	4
26. Verbally abusive to me	1	2	3	4
27. Unpredictable towards me	1	2	3	4
28. Physically violent or abusive to me	1	2	3	4
29. Made me feel in danger	1	2	3	4
30. Made me feel unsafe	1	2	3	4

Instructions: **Please circle the most appropriate number that best describes your FATHER or FATHER FIGURE as you remember him in your first 16 years of life.**

	Very like	Moderately like	Moderately unlike	Very unlike
1. Spoke to me with a warm and friendly voice	1	2	3	4
2. Did not help me as much as I needed	1	2	3	4
3. Let me do those things I liked doing	1	2	3	4
4. Seemed emotionally cold to me	1	2	3	4
5. Appeared to understand my problems and worries	1	2	3	4
6. Was affectionate to me	1	2	3	4
7. Liked me to make my own decisions	1	2	3	4
8. Did not want me to grow up	1	2	3	4
9. Tried to control everything I did	1	2	3	4
10. Invaded my privacy	1	2	3	4
11. Enjoyed talking things over with me	1	2	3	4
12. Frequently smiled at me	1	2	3	4
13. Tended to baby me	1	2	3	4
14. Did not seem to understand what I needed or wanted	1	2	3	4
15. Let me decide things for myself	1	2	3	4
16. Made me feel I wasn't wanted	1	2	3	4
17. Could make me better when I was upset	1	2	3	4
18. Did not talk with me very much	1	2	3	4
19. Tried to make me dependent on him	1	2	3	4

	Very like	Moderately like	Moderately unlike	Very unlike
20. Felt I could not look after myself unless he was around	1	2	3	4
21. Gave me as much freedom as I wanted	1	2	3	4
22. Let me go out as often as I wanted	1	2	3	4
23. Was overprotective of me	1	2	3	4
24. Did not praise me	1	2	3	4
25. Let me dress in any way I pleased	1	2	3	4
26. Verbally abusive to me	1	2	3	4
27. Unpredictable towards me	1	2	3	4
28. Physically violent or abusive to me	1	2	3	4
29. Made me feel in danger	1	2	3	4
30. Made me feel unsafe	1	2	3	4

**APPENDIX T – PAYMENT AND CONTACT FORM. REMITTED
DEPRESSIVES GROUP: TIME 1, TIME 2 AND TIME 3**

(Time 1)

PAYMENT AND CONTACT FORM

I have received \$15 in partial recognition for the time participating in this initial assessment.

I would like to receive summary information of the results of this research, Yes/No

Signed:

Name:

Researcher:

Date:

Contact address:

.....

(Time 2)

PAYMENT AND CONTACT FORM

I have received \$15 in partial recognition for the time participating in this initial assessment.

I would like to receive summary information of the results of this research, Yes/No

Name

Signed:

Researcher:

Date:

Contact
Address:

.....

.....

(Time 3)

PAYMENT AND CONTACT FORM

I have received \$15 in partial recognition for the time participating in this initial assessment.

I would like to receive summary information of the results of this research, Yes/No

Name

Signed:

Researcher:

Date:

Contact
Address:

.....

.....

APPENDIX U – THANK YOU LETTER. REMITTED DEPRESSIVES
GROUP: TIME 1, TIME 2 AND TIME 3

(Time 1)

THANK YOU LETTER

[Date]

[Participant Address]

Dear [Participant]

Thank you very much for taking the time meet with us. It is only when people are generous enough to give their time that such research can take place.

I will contact you again in six months time to see whether you would like to take part in the first follow-up interview. Of course you are under no obligation to do so, and can decide nearer the time.

Thank you again, your involvement is much appreciated.

Susan Watson

**Senior Clinical Psychologist
Principal Researcher**

(Time 2)

THANK YOU LETTER

[Date]

[Participant Address]

Dear [Participant]

Thank you very much for taking the time meet with us for the second time. It is only when people are generous enough to give their time that such research can take place.

I will contact you again in six months time to see whether you would like to take part in the final follow-up interview. Of course you are under no obligation to do so, and can decide nearer the time.

Thank you again, your involvement is much appreciated.

Susan Watson

**Senior Clinical Psychologist
Principal Researcher**

(Time 3)

THANK YOU LETTER

[Date]

[Participant Address]

Dear [Participant]

I would like to thank you very much for taking the time to meet with us for the final follow-up interview. We certainly value your commitment by staying involved in the study for the full year. We have just completed the final interviews for the first group of people who took part in the research. We have also just completed the first interviews for a new (smaller) group who will be going through a similar process over the next year. We will start some preliminary analysis in the not too distant future and I will certainly write with some of our findings when we have something to report.

Thank you again, without participants we could not do any research.

Yours sincerely

Susan Watson
Senior Clinical Psychologist
Principal Researcher

APPENDIX V – FOLLOW-UP LETTER.
REMITTED DEPRESSIVES GROUP: TIME 2 AND TIME 3

(Time 2)

FOLLOW-UP LETTER

[Date]

[Participant Address]

Dear [Participant]

It is almost six months since you met with one of our research team studying depression. As was discussed at the time we are very keen to meet up with people again as a follow-up to the initial part of the study. You are not obliged to stay involved with the study but we will be telephoning you shortly to discuss your possible future involvement.

Taking part in the second part of the study would again involve meeting individually with one of the researchers. This time however the meeting would be briefer as there was background information covered initially that doesn't have to be covered again. This second meeting would be more of a catch up, looking at life events that have occurred since you last met. As with last time you would receive \$15 to cover any associated transport costs/partially compensate you for your time.

One of the research team will be in touch shortly to discuss whether or not you would like to continue with the study.

Kind regards

Susan Watson
Principal Researcher.

Time 3

FOLLOW-UP LETTER

[Date]

[Participant Address]

Dear [Participant]

It is another six months since you met with one of our research team studying depression. You will remember that the study is a longitudinal one, and we are very keen to meet up with people one more time as a 12-month follow-up. You are not obliged to stay involved with the study but we will be telephoning you shortly to discuss your possible further involvement.

Taking part in this third and final part of the study would again involve meeting individually with one of the researchers. Again, the meeting would take between one and one and a half hours. As with last time you would receive \$15 to cover any associated transport costs/partially compensate you for your time.

One of the research team will be in touch shortly to discuss whether or not you would like to continue with the study.

Kind regards

Susan Watson
Principal Researcher.

APPENDIX W – DEQ SCORING PROGRAMME

DEQ SCORING PROGRAM BY DAVID ZUROFF
VERSION 1.0 - MAY, 1998

OPTIONS LINESIZE=80;
DATA STANDDEQ;

THE NEXT TWO LINES MUST BE ALTERED TO FIT YOUR FORMAT FOR THE RAW DEQ DATA.
THE TWO LINES AFTER THAT ARE INCLUDED TO HELP DEBUG INPUT STATEMENT.

INFILE 'E:\Z\NEWDEQ\DEQMM95.DAT' MISSOEVER;
INPUT ID 1-4 @7 (D1-D66) (1.);

IF _N_ LE 2 THEN DO; LIST; END;
IF _N_ LE 2 THEN DO; PUT /; PUT 'FOR ID= ' ID 'D1= ' D1 'D2= ' D2 'D3= ' D3
 'D64= ' D64 'D65= ' D65 'D66= ' D66; PUT /; END;

THE NEXT LINE CONTROLS HOW MUCH MISSING DATA IS TOLERATED BEFORE THE DEQ
SCORES ARE SET EQUAL TO MISSING. THE DEFAULT IS 10 MISSING ITEMS FOR THE DEPENDENCY
AND SELF-CRITICISM SCORES AND HALF OF THAT FOR NEEDINESS AND CONNECTEDNESS.
IF YOU WANT TO BE MORE OR LESS TOLERANT, ALTER THE VALUE FOR THE MAXMISS VARIABLE.

MAXMISS=10;

NOW THE PROGRAM READS IN THE MEANS, SD'S, AND WEIGHTS
FROM THE ORIGINAL FEMALE STANDARDIZATION SAMPLE.

m1=5.506;	s1=1.339;	dw1= -0.02319;	sw1= 0.03673;	ew1= 0.14927;
m2=3.820;	s2=1.988;	dw2=0.07030;	sw2=-0.01432;	ew2=-0.01324;
m3=3.532;	s3= 2.082;	dw3= 0.06926;	sw3=-0.07736;	ew3=-0.02951;
m4=5.552;	s4=1.615;	dw4= 0.03206;	sw4= 0.03094;	ew4= 0.02307;
m5=3.307;	s5=1.992;	dw5=0.01355;	sw5=-0.05101;	ew5=0.02200;
m6=3.658;	s6=2.036;	dw6=0.04351;	sw6= 0.01197;	ew6=-0.02678;
m7=4.411;	s7=1.930;	dw7=-0.02694;	sw7=0.09775;	ew7=-0.01181;
m8=3.328;	s8=1.652;	dw8= 0.02537;	sw8=-0.05726;	ew8=0.05103;
m9=2.182;	s9=1.571;	dw9=-0.08317;	sw9=0.04538;	ew9=-0.01620;
m10=4.558;	s10=1.837;	dw10=0.03005;	sw10=0.04911;	ew10=0.02379;
m11=4.258;	s11=1.941;	dw11= 0.02482;	sw11=0.06126;	ew11=-0.00246;
m12=3.230;	s12=1.933;	dw12=-0.07037;	sw12=0.01146;	ew12=0.02521;
m13=4.092;	s13=1.871;	dw13=-0.04211;	sw13=0.11987;	ew13= -0.02460;
m14=3.724;	s14=1.856;	dw14=-0.03128;	sw14=0.03769;	ew14= 0.08077;
m15=5.648;	s15=1.417;	dw15=0.00279;	sw15=0.02589;	ew15=0.12760;
m16=5.018;	s16=1.946;	dw16=-0.00157;	sw16=0.06401;	ew16=-0.02777;
m17=4.024;	s17=1.980;	dw17=-0.03403;	sw17=0.10221;	ew17=-0.00159;
m18=3.150;	s18=1.801;	dw18=-0.06665;	sw18= 0.03819;	ew18=-0.01589;
m19=4.002;	s19=2.035;	dw19=0.07419;	sw19=-0.01054;	ew19=-0.01135;
m20=5.867;	s20=1.556;	dw20=0.10236;	sw20=-0.06689;	ew20=0.00944;
m21=4.122;	s21=1.630;	dw21=0.02786;	sw21=-0.05890;	ew21=0.05205;
m22=4.629;	s22=2.042;	dw22=0.06688;	sw22=-0.00717;	ew22=0.02705;
m23=5.305;	s23=1.840;	dw23=0.09173;	sw23=-0.01249;	ew23=0.03383;
m24=5.379;	s24=1.337;	dw24=0.02392;	sw24=0.00209;	ew24=0.14802;
m25=4.465;	s25=1.878;	dw25=0.04276;	sw25=0.01860;	ew25=-0.03586;
m26=2.341;	s26=1.434;	dw26=-0.09037;	sw26=0.05005;	ew26=0.00817;

m27=3.968;	s27=1.995;	dw27=-0.05187;	sw27=0.00597;	ew27=0.00927;
m28=4.954;	s28=1.682;	dw28=0.06574;	sw28=0.02337;	ew28=0.00077;
m29=5.072;	s29=1.718;	dw29=0.05098;	sw29=-0.00081;	ew29=0.07744;
m30=4.142;	s30=1.769;	dw30=0.01632;	sw30=0.08121;	ew30=0.02176;
m31=4.323;	s31=1.885;	dw31=-0.04999;	sw31=0.03167;	ew31=0.04336;
m32=6.020;	s32=1.038;	dw32=0.08175;	sw32=-0.04510;	ew32=0.10751;
m33=5.285;	s33=1.292;	dw33=-0.01317;	sw33=0.00682;	ew33=0.17665;
m34=5.720;	s34=1.432;	dw34=0.08496;	sw34=-0.02324;	ew34=0.05609;
m35=3.152;	s35=2.115;	dw35=-0.04386;	sw35=0.10199;	ew35=0.00414;
m36=5.118;	s36=1.842;	dw36=0.01247;	sw36=0.08271;	ew36=0.00912;
m37=3.952;	s37=1.924;	dw37=0.02848;	sw37=0.05069;	ew37=-0.01189;
m38=4.596;	s38=1.896;	dw38=-0.08516;	sw38=0.05147;	ew38=0.09678;
m39=4.330;	s39=2.040;	dw39=0.00044;	sw39=0.03627;	ew39=0.04959;
m40=5.624;	s40=1.231;	dw40=0.06402;	sw40=-0.00431;	ew40=0.08400;
m41=5.020;	s41=1.591;	dw41=0.04975;	sw41=0.04722;	ew41=0.04215;
m42=4.554;	s42=1.698;	dw42=-0.08895;	sw42=0.05426;	ew42=0.13062;
m43=3.784;	s43=1.746;	dw43=-0.01167;	sw43=0.09927;	ew43=0.00842;
m44=5.074;	s44=1.674;	dw44=-0.05461;	sw44=0.09427;	ew44=0.10225;
m45=5.248;	s45=1.600;	dw45=0.07248;	sw45=0.00839;	ew45=0.07175;
m46=4.140;	s46=1.977;	dw46=0.07968;	sw46=-0.02010;	ew46=0.01388;
m47=3.102;	s47=2.095;	dw47=-0.03492;	sw47=0.05185;	ew47=-0.00019;
m48=3.158;	s48=1.575;	dw48=-0.01723;	sw48=-0.04104;	ew48=0.02859;
m49=4.598;	s49=1.725;	dw49=0.04585;	sw49=-0.04649;	ew49=0.06672;
m50=3.978;	s50=1.954;	dw50=0.06499;	sw50=0.00723;	ew50=-0.03549;
m51=3.394;	s51=1.770;	dw51=0.04542;	sw51=0.00064;	ew51=-0.07366;
m52=4.944;	s52=1.717;	dw52=0.09048;	sw52=-0.03285;	ew52=0.04618;
m53=4.200;	s53=1.699;	dw53=-0.03705;	sw53=0.09466;	ew53=0.05413;
m54=5.016;	s54=1.670;	dw54=-0.01936;	sw54=0.00308;	ew54=0.06005;
m55=4.798;	s55=1.725;	dw55=0.09017;	sw55=-0.02184;	ew55=-0.00627;
m56=2.888;	s56=1.547;	dw56=-0.02381;	sw56=0.07111;	ew56=-0.00821;
m57=1.894;	s57=1.467;	dw57=-0.04586;	sw57=0.04343;	ew57=-0.05780;
m58=4.882;	s58=1.952;	dw58=-0.04018;	sw58=0.09684;	ew58=0.03755;
m59=4.540;	s59=1.381;	dw59=-0.00951;	sw59=0.02292;	ew59=0.13237;
m60=4.958;	s60=1.654;	dw60=0.02849;	sw60=-0.01677;	ew60=0.10045;
m61=4.778;	s61=2.094;	dw61=0.04998;	sw61=-0.05021;	ew61=0.08390;
m62=4.260;	s62=1.525;	dw62=0.04498;	sw62=-0.09262;	ew62=0.10490;
m63=4.031;	s63=1.868;	dw63=-0.00270;	sw63=0.04571;	ew63=0.05139;
m64=5.363;	s64=1.417;	dw64=-0.00737;	sw64=0.08487;	ew64=0.09058;
m65=3.625;	s65=1.972;	dw65=-0.11663;	sw65=0.08033;	ew65=0.07744;
m66=4.489;	s66=1.589;	dw66=-0.02673;	sw66=0.09592;	ew66=0.08866;

 THE NEXT SET OF STATEMENTS STARTS THE SCORING ROUTINE TO PRODUCE SCORES
 FOR DEP, S-C, AND EFFICACY USING THE BLATT ET AL. SCORING.

IF DATA ARE MISSING FOR <= 6 ITEMS, SCORES ARE SIMPLY PRORATED.

IF MISSING DATA >= 7 BUT <= MAXMISS, SCORES ARE PRORATED AND A WARNING MESSAGE IS
 PRINTED TO THE LOG.

IF MISSING DATA > MAXMISS, THE SUBJECT'S SCORES ARE SET TO MISSING
 AND A WARNING IS PRINTED TO THE LOG.

 NITEM=0;
 DEPEND=0; SC=0; EFF=0;
 ARRAY D (J) D1-D66;
 ARRAY M (J) M1-M66;
 ARRAY S (J) S1-S66;
 ARRAY DW (J) DW1-DW66;
 ARRAY SW (J) SW1-SW66;
 ARRAY EW (J) EW1-EW66;

DO OVER D;

IF D = 0 OR D GE 8 THEN DO;

D= . ;
 PUT 60*** / ;

DEQ SCORING PROGRAM BY DAVID ZUROFF
VERSION 1.0 - MAY, 1998

OPTIONS LINESIZE=80;
DATA STANDDEQ;

THE NEXT TWO LINES MUST BE ALTERED TO FIT YOUR FORMAT FOR THE RAW DEQ DATA.
THE TWO LINES AFTER THAT ARE INCLUDED TO HELP DEBUG INPUT STATEMENT.

INFILE 'E:\Z\NEWDEQ\DEQMM95.DAT' MISSOEVER;
INPUT ID 1-4 @7 (D1-D66) (1.);

IF _N_ LE 2 THEN DO; LIST; END;
IF _N_ LE 2 THEN DO; PUT /; PUT 'FOR ID=' ID 'D1=' D1 'D2=' D2 'D3=' D3
 'D64=' D64 'D65=' D65 'D66=' D66; PUT /; END;

THE NEXT LINE CONTROLS HOW MUCH MISSING DATA IS TOLERATED BEFORE THE DEQ
SCORES ARE SET EQUAL TO MISSING. THE DEFAULT IS 10 MISSING ITEMS FOR THE DEPENDENCY
AND SELF-CRITICISM SCORES AND HALF OF THAT FOR NEEDINESS AND CONNECTEDNESS.
IF YOU WANT TO BE MORE OR LESS TOLERANT, ALTER THE VALUE FOR THE MAXMISS VARIABLE.

MAXMISS=10;

NOW THE PROGRAM READS IN THE MEANS, SD'S, AND WEIGHTS
FROM THE ORIGINAL FEMALE STANDARDIZATION SAMPLE.

m1=5.506;	s1=1.339;	dw1= -0.02319;	sw1= 0.03673;	ew1= 0.14927;
m2=3.820;	s2=1.988;	dw2=0.07030;	sw2=-0.01432;	ew2=-0.01324;
m3=3.532;	s3= 2.082;	dw3= 0.06926;	sw3=-0.07736;	ew3=-0.02951;
m4=5.552;	s4=1.615;	dw4= 0.03206;	sw4= 0.03094;	ew4= 0.02307;
m5=3.307;	s5=1.992;	dw5=0.01355;	sw5=-0.05101;	ew5=0.02200;
m6=3.658;	s6=2.036;	dw6=0.04351;	sw6= 0.01197;	ew6=-0.02678;
m7=4.411;	s7=1.930;	dw7=-0.02694;	sw7=0.09775;	ew7=-0.01181;
m8=3.328;	s8=1.652;	dw8= 0.02537;	sw8=-0.05726;	ew8=0.05103;
m9=2.182;	s9=1.571;	dw9=-0.08317;	sw9=0.04538;	ew9=-0.01620;
m10=4.558;	s10=1.837;	dw10=0.03005;	sw10=0.04911;	ew10=0.02379;
m11=4.258;	s11=1.941;	dw11= 0.02482;	sw11=0.06126;	ew11=-0.00246;
m12=3.230;	s12=1.933;	dw12=-0.07037;	sw12=0.01146;	ew12=0.02521;
m13=4.092;	s13=1.871;	dw13=-0.04211;	sw13=0.11987;	ew13= -0.02460;
m14=3.724;	s14=1.856;	dw14=-0.03128;	sw14=0.03769;	ew14= 0.08077;
m15=5.648;	s15=1.417;	dw15=0.00279;	sw15=0.02589;	ew15=0.12760;
m16=5.018;	s16=1.946;	dw16=-0.00157;	sw16=0.06401;	ew16=-0.02777;
m17=4.024;	s17=1.980;	dw17=-0.03403;	sw17=0.10221;	ew17=-0.00159;
m18=3.150;	s18=1.801;	dw18=-0.06665;	sw18= 0.03819;	ew18=-0.01589;
m19=4.002;	s19=2.035;	dw19=0.07419;	sw19=-0.01054;	ew19=-0.01135;
m20=5.867;	s20=1.556;	dw20=0.10236;	sw20=-0.06689;	ew20=0.00944;
m21=4.122;	s21=1.630;	dw21=0.02786;	sw21=-0.05890;	ew21=0.05205;
m22=4.629;	s22=2.042;	dw22=0.06688;	sw22=-0.00717;	ew22=0.02705;
m23=5.305;	s23=1.840;	dw23=0.09173;	sw23=-0.01249;	ew23=0.03383;
m24=5.379;	s24=1.337;	dw24=0.02392;	sw24=0.00209;	ew24=0.14802;
m25=4.465;	s25=1.878;	dw25=0.04276;	sw25=0.01860;	ew25=-0.03586;
m26=2.341;	s26=1.434;	dw26=-0.09037;	sw26=0.05005;	ew26=0.00817;

m27=3.968;	s27=1.995;	dw27=-0.05187;	sw27=0.00597;	ew27=0.00927;
m28=4.954;	s28=1.682;	dw28=0.06574;	sw28=0.02337;	ew28=0.00077;
m29=5.072;	s29=1.718;	dw29=0.05098;	sw29=-0.00081;	ew29=0.07744;
m30=4.142;	s30=1.769;	dw30=0.01632;	sw30=0.08121;	ew30=0.02176;
m31=4.323;	s31=1.885;	dw31=-0.04999;	sw31=0.03167;	ew31=0.04336;
m32=6.020;	s32=1.038;	dw32=0.08175;	sw32=-0.04510;	ew32=0.10751;
m33=5.285;	s33=1.292;	dw33=-0.01317;	sw33=0.00682;	ew33=0.17665;
m34=5.720;	s34=1.432;	dw34=0.08496;	sw34=-0.02324;	ew34=0.05609;
m35=3.152;	s35=2.115;	dw35=-0.04386;	sw35=0.10199;	ew35=0.00414;
m36=5.118;	s36=1.842;	dw36=0.01247;	sw36=0.08271;	ew36=0.00912;
m37=3.952;	s37=1.924;	dw37=0.02848;	sw37=0.05069;	ew37=-0.01189;
m38=4.596;	s38=1.896;	dw38=-0.08516;	sw38=0.05147;	ew38=0.09678;
m39=4.330;	s39=2.040;	dw39=0.00044;	sw39=0.03627;	ew39=0.04959;
m40=5.624;	s40=1.231;	dw40=0.06402;	sw40=-0.00431;	ew40=0.08400;
m41=5.020;	s41=1.591;	dw41=0.04975;	sw41=0.04722;	ew41=0.04215;
m42=4.554;	s42=1.698;	dw42=-0.08895;	sw42=0.05426;	ew42=0.13062;
m43=3.784;	s43=1.746;	dw43=-0.01167;	sw43=0.09927;	ew43=0.00842;
m44=5.074;	s44=1.674;	dw44=-0.05461;	sw44=0.09427;	ew44=0.10225;
m45=5.248;	s45=1.600;	dw45=0.07248;	sw45=0.00839;	ew45=0.07175;
m46=4.140;	s46=1.977;	dw46=0.07968;	sw46=-0.02010;	ew46=0.01388;
m47=3.102;	s47=2.095;	dw47=-0.03492;	sw47=0.05185;	ew47=-0.00019;
m48=3.158;	s48=1.575;	dw48=-0.01723;	sw48=-0.04104;	ew48=0.02859;
m49=4.598;	s49=1.725;	dw49=0.04585;	sw49=-0.04649;	ew49=0.06672;
m50=3.978;	s50=1.954;	dw50=0.06499;	sw50=0.00723;	ew50=-0.03549;
m51=3.394;	s51=1.770;	dw51=0.04542;	sw51=0.00064;	ew51=-0.07366;
m52=4.944;	s52=1.717;	dw52=0.09048;	sw52=-0.03285;	ew52=0.04618;
m53=4.200;	s53=1.699;	dw53=-0.03705;	sw53=0.09466;	ew53=0.05413;
m54=5.016;	s54=1.670;	dw54=-0.01936;	sw54=0.00308;	ew54=0.06005;
m55=4.798;	s55=1.725;	dw55=0.09017;	sw55=-0.02184;	ew55=-0.00627;
m56=2.888;	s56=1.547;	dw56=-0.02381;	sw56=0.07111;	ew56=-0.00821;
m57=1.894;	s57=1.467;	dw57=-0.04586;	sw57=0.04343;	ew57=-0.05780;
m58=4.882;	s58=1.952;	dw58=-0.04018;	sw58=0.09684;	ew58=0.03755;
m59=4.540;	s59=1.381;	dw59=-0.00951;	sw59=0.02292;	ew59=0.13237;
m60=4.958;	s60=1.654;	dw60=0.02849;	sw60=-0.01677;	ew60=0.10045;
m61=4.778;	s61=2.094;	dw61=0.04998;	sw61=-0.05021;	ew61=0.08390;
m62=4.260;	s62=1.525;	dw62=0.04498;	sw62=-0.09262;	ew62=0.10490;
m63=4.031;	s63=1.868;	dw63=-0.00270;	sw63=0.04571;	ew63=0.05139;
m64=5.363;	s64=1.417;	dw64=-0.00737;	sw64=0.08487;	ew64=0.09058;
m65=3.625;	s65=1.972;	dw65=-0.11663;	sw65=0.08033;	ew65=0.07744;
m66=4.489;	s66=1.589;	dw66=-0.02673;	sw66=0.09592;	ew66=0.08866;

THE NEXT SET OF STATEMENTS STARTS THE SCORING ROUTINE TO PRODUCE SCORES
FOR DEP, S-C, AND EFFICACY USING THE BLATT ET AL. SCORING.

IF DATA ARE MISSING FOR <= 6 ITEMS, SCORES ARE SIMPLY PRORATED.

IF MISSING DATA >=7 BUT <= MAXMISS, SCORES ARE PRORATED AND A WARNING MESSAGE IS
PRINTED TO THE LOG.

IF MISSING DATA > MAXMISS, THE SUBJECT'S SCORES ARE SET TO MISSING
AND A WARNING IS PRINTED TO THE LOG.

```

NITEM=0;
DEPEND=0; SC=0; EFF=0;
ARRAY D (J) D1-D66;
ARRAY M (J) M1-M66;
ARRAY S (J) S1-S66;
ARRAY DW (J) DW1-DW66;
ARRAY SW (J) SW1-SW66;
ARRAY EW (J) EW1-EW66;

```

DO OVER D;

IF D = 0 OR D GE 8 THEN DO;

```

D= . ;
PUT 60**** / ;

```

APPENDIX X – CORRELATIONS BETWEEN PARKER’S AND KENDLER’S CONSTRUCTS FROM THE PBI

Correlations between similar constructs from Parker's and Kendler's versions of the PBI at Time 1, N = 61

	Parker's constructs			
	Care (Maternal)	Care (Paternal)	Protection (Maternal)	Protection (Paternal)
Kendler's constructs	-	-	-	-
<i>Univeristy .Students</i>	-	-	-	-
Warmth (Maternal)	.98**	-	-	-
Warmth (Paternal)	-	.97**	-	-
Protection (Maternal)	-	-	.88**	-
Protection .(Paternal)	-	-	-	.87**
Authoritarianism (Maternal)	-	-	.54**	-
Authoritarianism (Paternal)	-	-	-	.52**
	-	-	-	-
<i>Remitted Depressives</i>	-	-	-	-
Warmth (Maternal)	.96**	-	-	-
Warmth (Paternal)	-	.97**	-	-
Protection (Maternal)	-	-	.85**	-
Protection(Paternal)	-	-	-	.87**
Authoritarianism (Maternal)	-	-	.54**	-
Authoritarianism (Paternal)	-	-	-	.52**

Note: ** p<.01, * p<.05

APPENDIX Y – SUMMARY OF REGRESSION MODELS (CHAPTER 11)

Regression models for change in Sociotropy from Time 1 to Time 3.

Change in Sociotropy

University Students

Self-Report Life Events Measure - (NEQ).

For each of the six models summarised in Table A.1, the dependent variable is Change in Sociotropy (T1-T3). Independent variables are Sociotropy (T1), BDI-II (T1), and life event variables from the NEQ.

Table A.1. Change in sociotropy, university student group, NEQ, BDI-II

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.19	p<.05		
Sociotropy (T1)			-.51	p<.05
BDI-II (T3)			.16	n.s
Mean upset (T1-T3)			1.48	n.s
Model 2.	.13	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
Mean interpersonal upset (T1-T3)			n/a	n/a
Model 3	.15	p<.05		
Sociotropy (T1)			-.49	p<.05
BDI-II (T3)			.22	n.s
Mean achievement upset (T1-T3)			.16	n.s
Model 4	.16	p<.05		
Sociotropy (T1)			-.54	p<.05
BDI-II (T3)			.18	n.s
Max upset (T1-T3)			.20	n.s
Model 5	.15	p = .05		
Sociotropy (T1)			-.57	p<.05
BDI-II (T3)			.37	n.s
Max interpersonal upset (T1-T3)			.17	n.s
Model 6	.13	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
Max achievement upset (T1-T3)			n/a	n/a

Note.

BDI-II = Beck Depression Inventory, Second Edition; n.s. = not significant; n/a = not applicable; Sig = significance.

Remitted depressives

Self-Report Measure Life Events Measure (NEQ).

For each of the six models summarised in Table A.2, the dependent variable is change in Sociotropy (T1-T3). Independent variables are Sociotropy (T1), BDI-II (T1), and life event variables from the NEQ.

Table A.2. Change in Sociotropy, remitted depressive group, NEQ, BDI-II

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.19	p<.05		
Sociotropy (T1)			-.63	p<.05
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean upset (T1-T3)			n/a	n/a
Model 2.	.19	p<.05		
Sociotropy (T1)			-.46	p<.05
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean interpersonal upset (T1-T3)			n/a	n/a
Model 3	.19	p<.05		
Sociotropy (T1)			-.46	p<.05
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean achievement upset (T1-T3)			n/a	n/a
Model 4	.18	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max upset (T1-T3)			n/a	n/a
Model 5	.16	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max interpersonal upset (T1-T3)			n/a	n/a
Model 6	.18	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max achievement upset (T1-T3)			n/a	n/a

Note.

BDI-II = Beck Depression Inventory, Second Edition; n.s. = not significant; n/a = not applicable; Sig = significance.

For each of the six models summarised in Table A.3, the dependent variable is change in Sociotropy (T1-T3). Independent variables are Sociotropy (T1), HRSD (T1), and life event variables from the NEQ.

Table A.3. Change in Sociotropy, remitted depressive group, NEQ, BDI-I, HRSD

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.17	p<.05		
Sociotropy (T1)			-.46	p<.05
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean upset (T1-T3)			n/a	n/a
Model 2.	.16	p<.05		
Sociotropy (T1)			-.44	p<.05
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean interpersonal upset (T1-T3)			n/a	n/a
Model 3	.16	p<.05		
Sociotropy (T1)			-.44	p<.05
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean achievement upset (T1-T3)			n/a	n/a
Model 4	.06	n.s		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max upset (T1-T3)			n/a	n/a
Model 5	.06	n.s		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max interpersonal upset (T1-T3)			n/a	n/a
Model 6	.12	n.s		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max achievement upset (T1-T3)			n/a	n/a

Note.

HRSD = Hamilton Rating Scale for Depression; n.s. = not significant; n/a = not applicable; Sig = significance.

Interview Measure of Life Events (ELEI).

For each of the eight models summarised in Table A.4, the dependent variable is change in Sociotropy (T1-T3). Independent variables are Sociotropy (T1), BDI-II (T1), and life event variables from the ELEI.

Table A.4. Change in Sociotropy, remitted depressive group, ELEI, BDI-II

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.21	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean stress (T1-T3)			n/a	n/a
Model 2.	.17	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
Mean team rating of stress (T1-T3)			n/a	n/a
CSI			n/a	n/a
Model 3	.17	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
Mean impact on relationships (T1-T3)			n/a	n/a
CSI			n/a	n/a
Model 4	.16	n.s.		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
Mean impact on achievements (T1-T3)			n/a	n/a
CSI			n/a	n/a
Model 5	.18	n.s.		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max stress (T1-T3)			n/a	n/a
Model 6	.19	n.s.		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max team rating of stress (T1-T3)			n/a	n/a
Model 7	.17	n.s.		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max impact on relationships (T1-T3)			n/a	n/a
Model 8	.17	n.s		
Sociotropy (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max impact on achievements (T1-T3)			n/a	n/a

Note.

BDI-II = Beck Depression Inventory, Second Edition; n.s. = not significant; n/a = not applicable; Sig = significance.

For each of the eight models summarised in Table A.5, the dependent variable is change in Sociotropy (T1-T3). Independent variables are Sociotropy (T1), HRSD (T1), and life event variables from the ELEI.

Table A.5 Change in Sociotropy, remitted depressive group, ELEI, HRSD

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.12	n.s.		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean stress (T1-T3)			n/a	n/a
Model 2.	.08	n.s.		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
Mean team rating of stress (T1-T3)			n/a	n/a
CSI			n/a	n/a
Model 3	.06	n.s.		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
Mean impact on relationships (T1-T3)			n/a	n/a
CSI			n/a	n/a
Model 4	.06	n.s.		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
Mean impact on achievements (T1-T3)			n/a	n/a
CSI			n/a	n/a
Model 5	.10	n.s.		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max stress (T1-T3)			n/a	n/a
Model 6	.07	n.s.		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max team rating of stress (T1-T3)			n/a	n/a
Model 7	.06	n.s.		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max impact on relationships (T1-T3)			n/a	n/a
Model 8	.07	n.s.		
Sociotropy (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max impact on achievements (T1-T3)			n/a	n/a

Note.

BDI-II = Beck Depression Inventory, Second Edition; n.s. = not significant; n/a = not applicable; Sig = significance.

Regression models for change in Dependency from Time 1 to Time 3.

Remitted Depressives

Self-Report Life Events Measure (NEQ).

For each of the six models summarised in Table A.6, the dependent variable is change in Dependency (T1-T3). Independent variables are Dependency (T1), BDI-II (T1), and life event variables from the NEQ.

Table A.6. Change in Dependency, Remitted depressive group, NEQ, BDI-II

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.59	p<.01		
Dependency (T1)			-.65	p<.01
BDI-II (T3)			-.124	n.s
CSI			.28	n.s
Mean upset (T1-T3)			.17	n.s
Model 2.	.09	n.s		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean interpersonal upset (T1-T3)			n/a	n/a
Model 3	.32	p<.05		
Dependency (T1)			-.68	p<.01
BDI-II (T3)			-.32	n.s
CSI			.19	n.s
Mean achievement upset (T1-T3)			.21	n.s
Model 4	.48	p<.01		
Dependency (T1)			-.57	p<.01
BDI-II (T3)			-.07	n.s
CSI			.30	n.s
Max upset (T1-T3)			.23	n.s
Model 5	.12	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max interpersonal upset (T1-T3)			n/a	n/a
Model 6	.36	p<.05		
Dependency (T1)			-.56	p<.01
BDI-II (T3)			-.26	n.s
CSI			.125	n.s
Max achievement upset (T1-T3)			.18	n.s

Note:

BDI-II = Beck Depression Inventory, Second Edition; n.s. = not significant; n/a = not applicable; Sig = significance.

For each of the six models summarised in Table A.7, the dependent variable is change in Dependency (T1-T3). Independent variables are Dependency (T1), HRSD (T1), and life event variables from the NEQ.

Table A.7. Change in Dependency, Remitted depressive group, NEQ, HRSD

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.23	p<.05		
Dependency (T1)			-.54	p<.05
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean upset (T1-T3)			n/a	n/a
Model 2.	.20	p<.05		
Dependency (T1)			-.50	p<.05
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean interpersonal upset (T1-T3)			n/a	n/a
Model 3	.22	p<.05		
Dependency (T1)			-.54	p<.05
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean achievement upset (T1-T3)			n/a	n/a
Model 4	.25	p<.05		
Dependency (T1)			-.50	p<.05
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max upset (T1-T3)			n/a	n/a
Model 5	.20	p<.05		
Dependency (T1)			-.50	p<.05
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max interpersonal upset (T1-T3)			n/a	n/a
Model 6	.22	p<.05		
Dependency (T1)			-.50	p<.05
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max achievement upset (T1-T3)			n/a	n/a

Note.

BDI-II = Beck Depression Inventory, Second Edition; n.s. = not significant; n/a = not applicable; Sig = significance.

Interview Measure of Life Events (ELEI)

For each of the eight models summarised in Table A.8, the dependent variable is change in Dependency (T1-T3). Independent variables are Dependency (T1), BDI-II (T1), and life event variables from the ELEI

Table A.8. Change in Dependency, Remitted depressive group, ELEI, BDI-II

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.13	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean stress (T1-T3)			n/a	n/a
Model 2.	.21	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean team rating of stress (T1-T3)			n/a	n/a
Model 3	.14	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean impact on relationships (T1-T3)			n/a	n/a
Model 4	.13	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean impact on achievements (T1-T3)			n/a	n/a
Model 5	.15	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max stress (T1-T3)			n/a	n/a
Model 6 ⁹²	.40	p<.05		
Dependency (T1)			-.54	P<.01
BDI-II (T3)			-.21	n.s.
CSI			.17	n.s.
Max team rating of stress (T1-T3)			.47	p<.01
Model 7	.39	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Max impact on relationships (T1-T3)			n/a	n/a
Model 8	.36	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
Max impact on achievements (T1-T3)			n/a	n/a
CSI			n/a	n/a
Note.				
BDI-II = Beck Depression Inventory, Second Edition; n.s. = not significant;				
n/a = not applicable; Sig = significance				

⁹² This model is discussed in more detail in Chapter 11, p. 132.

For each of the eight models summarised in Table 9, the dependent variable is change in Dependency (T1-T3). Independent variables are Dependency (T1), HRSD (T1), and life event variables from the ELEI.

Table A.9. Change in Dependency, Remitted depressive group, ELEI, HRSD.

Independent Variables	Adjusted R ²	Sig (ANOVA)	Beta	Sig
Model 1.	.21	n.s		
Dependency (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean stress (T1-T3)			n/a	n/a
Model 2.	.34	n.s.		
Dependency (T1)			n/a	n/a
BDI-II (T3)			n/a	n/a
CSI			n/a	n/a
Mean team rating of stress (T1-T3)			n/a	n/a
Model 3	.27	n.s		
Dependency (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean impact on relationships (T1- T3)			n/a	n/a
Model 4	.22	n.s		
Dependency (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Mean impact on achievements (T1-T3)			n/a	n/a
Model 5	.37	p<.05		
Dependency (T1)			-.65	p<.05
HRSD (T3)			.64	p<.05
CSI			-.44	n.s
Max stress (T1-T3)			-.41	n.s
Model 6	.36	p<.05		
Dependency (T1)			-.58	p<.05
HRSD (T3)			.25	n.s
CSI			-.07	n.s
Max team rating of stress (T1-T3)			.39	n.s
Model 7	.23	n.s		
Dependency (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
CSI			n/a	n/a
Max impact on relationships (T1-T3)			n/a	n/a
Model 8	.25	n.s		
Dependency (T1)			n/a	n/a
HRSD (T3)			n/a	n/a
Max impact on achievements (T1-T3)			n/a	n/a
CSI			n/a	n/a
Note.				
BDI-II = Beck Depression Inventory, Second Edition; n.s. = not significant; n/a = not applicable; Sig = significance				