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**Combining Bibliotherapy and Community Based Intervention:
An Alternative Model for Treating Depression in Older Adults
with Health Problems**

Manal Guirguis-Younger

**A thesis submitted to the School of Graduate Studies of the
University of Ottawa as partial fulfilment of the requirements
for the degree of Doctor in Philosophy**

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Dedication

I would like to dedicate this work my grandparents, Susan and Wahba Farag and Miriam and Gabriel Guirguis, for teaching me that old age is wisdom, freedom, and the culmination of much work and many dreams.

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Abstract

Older persons who suffer from health problems leading to functional impairment are at risk for developing depression. Moreover, the combination of functional impairment and depression creates a complex situation requiring special treatment consideration. A successful intervention must address issues unique to late-life depression and must do so in the context of physical disability caused by serious health problems. The purpose of this work was to create a community-based intervention program that would address the needs of this special population of older persons. An intervention based on behavioural principles and on an empirically validated model, Lewinsohn's (1986) Control Your Depression, was modified to suit the needs of this population. The modifications included three distinctive features. First, the program was designed to be readable and relevant to the life circumstances of older adults with special physical impediments. Second, the aim of the program was to deliver this intervention in a self-administered, minimal-contact format, in order to facilitate access to this under-serviced population. Third, the program was adapted to be delivered by non-mental health professionals – in this case, home-care nurses – who were in a health-care delivery role with older individuals. These three elements were combined to create an efficacious model of service delivery that was able to overcome barriers to access, make use of existing community resources, address special issues of functional impairment, and that was deliverable with minimal supervision. This model was tested in three separate series, each with two participants. A multiple-baseline design allowed a data-driven refinement of the model, and was also well-suited for behavioural analysis. In Series A, we tested

the feasibility of the model. Results indicated that the program is feasible, and especially highlighted the role of reinstating pleasant activities in alleviating depression in these participants. Series B further examined the role of pleasant activities. Results confirmed the initial findings that reinstating pleasant activities is a pivotal part of the treatment for this population. Some adjustments were added to produce a finalized model in Series C, with positive results. Overall, these three series of studies indicated that the model is feasible, deliverable, and efficacious in reducing depression in older participants. In addition, results showed a positive impact on participants' functional ability, especially in the areas where the impairment is reversible, such as social functioning and activities of daily living. This model has implications for future applications that encourage the development of alternative models of intervention capable of meeting the unique needs of special populations.

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INTRODUCTION

Older adults constitute the most rapidly growing age group in Canada. Between 1981 and 1998, there was a documented 57% increase in persons aged 65 years and up. Statistics Canada predicts that, in the year 2041, nearly one-quarter of the Canadian population will be over the age of 65. Moreover, these increases are most pronounced in persons over the age of 85 (Statistics Canada, 1998). Consequently, numerous concerns associated with ageing and the aged have come to the fore in various disciplines. Issues such as long-term care, social welfare, medical treatment, home- and community-based services, and mental health have become highly significant to policy makers, especially in the context of an ageing population and a time of fiscal constriction.

For many older persons, the process of ageing entails a number of life changes that can often be considered positive, such as financial security, reduced anxiety, and interpersonally-satisfying family relations (i.e., successful ageing). On the other hand, growing older can also involve many stressors, such as financial loss, loneliness, bereavement, role changes, dependency, and ill health.

Recent decades have witnessed a surging interest in the study of ageing across a wide variety of disciplines. The impact of ageing and age-associated changes on psychological well-being, as well as pressing social concerns to find solutions for late-life problems, have stimulated the interest of many researchers and clinicians. This is especially true of late-life depression, which has been documented as the most frequent psychological problem requiring intervention in this population. Although depression has been amply studied in younger adults, the uniqueness of ageing and its impact on the

symptomatology and course of this disorder awaits the benefit of more comprehensive investigations. Intervention and theoretical models have to be designed to accommodate this population on many dimensions. For example, questions regarding the context in which late-life depression tends to occur, the triggering life events and ensuing consequences of being a depressed older adult, the nature of a suitable treatment, and issues of accessibility and delivery are fundamental considerations. In the section to follow, the literature on the prevalence of depression in old age will be reviewed. Of particular interest are studies that link health conditions and disability with depression in older persons. In addition we will examine empirically validated treatment for older persons, as well as related issues such as under-recognition of depressive disorders in older adults, and poor access to treatment.

Prevalence

The existing literature on the prevalence of depression in older adults with depression contains some significant discrepancies. This is probably a consequence of varied diagnostic criteria, assessment procedures, and occasionally inadequate standardization of instruments for this age group. Most epidemiological studies conceptualize depression either as a diagnosable syndrome based on standardized instruments (e.g., DSM-IV; American Psychiatric Association, 1994), or as a set of symptoms that can be assessed on a continuum of severity (e.g., self-report instruments) (see Karel, 1997 for a discussion). Some investigators caution, however, that the use of standardized instruments artificially lowers prevalence rates (Blazer 1994). This may result from the failure of such instruments to address many correlates of ageing that are

significantly related to the presentation of depression, such as the inability to participate because of physical illness or disability, failure to recognize functional impairment by depressive symptoms, and institutionalization (Karel, 1997; Blazer 1994). With this caution in mind, studies presenting both types of information will be reviewed.

In an attempt to ascertain the prevalence of depression and depressive symptomatology in later life, Blazer and Williams (1980) surveyed 997 community-dwelling older persons. The diagnostic criteria used in the study were based on those established by the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychiatric Association, 1980). Results showed that 14.7% of the elderly surveyed evinced some type of dysphoric symptomatology. Sixty-five (i.e., 6.5%) elders were reported to have depressive symptoms associated with poor health, and 45 (i.e., 4.5%) were dysphoric. In a similar study, Blazer, Hughes, and George (1987) found that in a sample of community elderly, 27% reported depressive symptoms.

Koenig and his colleagues (Koenig, Meador, Cohen, & Blazer, 1988) studied depressive disorders in 130 medical inpatients, aged 70 years and over. Using a structured interview (Hamilton Rating Scale for Depression), as well as self-ratings (Geriatric Depression Scale), these researchers reported major depression in 11.5% of their sample and other substantial depressive symptoms in 23%. Similarly, Cheah and Beard (1980) found that 31% of patients admitted to a medical geriatric evaluation unit had depression or dysphoria.

Some investigators have attempted to summarize the existing literature on prevalence (e.g., Cappeliez, 1993). In general, it is reported that 5 to 8% of the overall

population of individuals 65 years of age and over suffer from clinical depression. These estimates were based on diagnosis of a dysthymic disorder or a major depressive episode, according to the criteria of the DSM-III or DSM-III revised edition (DSM-III-R; American Psychiatric Association, 1987). Prevalence estimates increase to 10% to 15% if older persons who show a range of depressive symptoms, but do not meet the criteria of DSM-III-R, are included (Cappeliez, 1993). Similarly, Blazer (1994) reported that the prevalence of clinically significant depressive symptoms ranges between 8% and 15% in community older adults. In a 1991 statement by the National Institute of Mental Health Consensus Development Conference on Diagnosis and Treatment of Depression in Late Life (Friedhoff, 1994) depressive symptoms were reported to occur in nearly 15% of older persons living in the community.

A recent review of 34 community-based studies found that prevalence of depressive symptoms varied widely from study to study, ranging from 0.4% to 35%, with the average prevalence of clinically significant depressive symptoms among older persons being 13.5% (Beekman, Copeland, & Prince, 1999). In a similar review, Gallo and Lebowitz (1999) estimated that 15% to 20% of older persons report depressive symptoms that have a negative impact on functioning and quality of life.

Some epidemiological studies have concentrated on identifying the prevalence of depressive symptoms in older persons with health problems and associated functional impairment. Research on the life-time prevalence of depressive disorders in older adults suffering from a medical condition (e.g., diabetes, coronary disease, hypertension) indicates that older adults in poor health, or who suffer from disability, present a higher

risk for depression. The prevalence rates of affective disturbance among physically ill outpatients ranged from 15 to 40%, with frequent reports indicating estimates in the upper ranges (Okimoto, Barnes, Veith, Raskind, Inui, & Carter, 1982; Waxman & Carner, 1984; Rapp, Parisi, & Walsh, 1988).

In a longitudinal study, Zarit, Femia, Gatz, and Johansson (1999) examined prevalence of depression among 84- to 90-year-olds. Participants ($N=324$) were interviewed three times over a six-year interval (once every 2 years) using the short form of the Center for Epidemiological studies Depression Scale. Prevalence of clinically significant mood symptoms was estimated to be nearly 50%.

Blazer (1994) reported that prevalence of depressive symptoms tends to be higher in treatment settings (i.e., 25% to 30%), such as hospitals and nonpsychiatric outpatient clinics, than in community settings (i.e., 5% to 12%).

The Link between Depression and Disability/Medical illness

Older adults are an extremely heterogeneous group, with varying life conditions. However, there are some anticipated changes that occur with advancing age. One of the most significant changes is alteration in overall health and functional ability (Karel, 1997). Adjustment to poor health and disability is likely to be difficult and may have negative consequences for coping in late life.

Rapp and colleagues (Rapp et al., 1988) found depression to be the single most common psychological disorder detected among elderly medical inpatients. Furthermore, these researchers reported that medically ill elders who were diagnosed with some form of depression were more likely to show higher levels of subjective distress and inadequate

functioning than those receiving other psychiatric diagnoses. Similarly, Zarit et al. (1999) reported that high rates of depression were statistically linked to poor health and functional impairment. This work strongly suggests that older persons who suffer from a medical condition are vulnerable to depression.

However, for quite some time, the relationship between depression, physical illness, and functional impairment was unclear. Zeiss and colleagues (Zeiss, Lewinsohn, Rohde, & Seeley, 1996) postulated that onset of depression is related to physical disease indirectly, and that the presence of associated impairment is the main triggering event for late-life depression. These investigators recruited 680 community older adults and categorized their functional status as low-impairment, medium-impairment, or high-impairment. Results indicated that depression was significantly higher in the high-impairment group than in the other two groups. Further, the presence of a medical condition did not increase risk for depression; however, the level of functional impairment did. These authors believe that functional impairment interferes with activities that are positively reinforcing and may set a sequence of negative events in motion, triggering the onset of depression.

Turner and Noh (1988) reported that depression was three times greater among older adults with functional disability than among the non-disabled elderly. In the same vein, Gurland, Wilder, Golden, Teresi, Gurland, and Copeland (1988) reported that disability in old age had a stronger association with depression than did such adverse circumstances as bereavement, financial losses, or social isolation.

Disability becomes an important factor in late-life depression, and some of the work attempting to delineate causal pathways between depression and disability is of great relevance to the treatment of late-life depression. For example, Gurland and colleagues (Gurland et al., 1988) suggest that disability may act to increase vulnerability to depression and/or impede recovery by maintaining existing negative affect. Determinants of life satisfaction such as health condition, internal locus of control, and social involvement can be adversely influenced by disability (Gurland et al., 1988), which may in turn precipitate depression.

Although certainly there is cumulative evidence suggesting a strong link between depression and functional disability, the causal direction of the relationship is unclear. While it is tempting to conclude that disability is an antecedent for depression, some researchers have suggested that the relationship between functional impairment and depression is complex and may be bi-directional. That is, depression may increase the risk of disability and hamper recovery from temporary conditions. Turner and Noh (1988), for example, suggested that depressive states may in fact increase the propensity for developing functional disability. These authors reported that depression significantly predicted the number of life events leading to disability, four years following the initial onset of depressive symptoms. In a similar study with a sample of community older persons, Bruce, Seeman, Merrill, and Blazer (1994) found that high levels of baseline depressive symptoms were associated with an increased risk for developing functional impairment, detected in activities of daily living.

Penninx and colleagues (Penninx, Leveille, Ferrucci, Eijk, & Guralnik, 1999) studied a large sample of older adults who were initially free from disability. Participants were interviewed three times over the course of six years, and their mood and functional status was assessed. It was found that participants who experienced depression presented a higher risk for subsequent disability. Functional impairment occurred mostly in the area of mobility and activities of daily living. Penninx et al. (1999) reported that some of this increased risk was accounted for by restricted physical activity and social withdrawal.

Similarly, Fiebel and Springer (1982) reported that elderly stroke patients were much less likely to overcome disability if their condition was complicated by depressive affect. In a six-month follow-up of these stroke patients, these researchers reported that non-depressed elders retained nearly 60% of their social involvement, whereas those suffering from depression retained only 30% of prior social activities. This is not surprising, since other studies have linked disability occurring in late life to both the motivational and the affective components of depression (Forsell, Jorm, & Winblad, 1994). There appears to be an important link between disability, depression, and social involvement. The presence of disability may curtail an older person's ability to remain active and socially involved. The resulting isolation and loss of self-esteem may indeed be associated with negative mood, motivation, and taxed coping.

Depression and functional impairment appear to be strongly related. Although the directional of causality is difficult to determine, the literature suggests that the presence of depression may impede recovery from disability and actually increase the risk for events

leading to disability. There is also evidence that disability can lead to activity restriction that may lead to depression.

A Behavioural Conceptualization of the Link between Depression and Disability

Lewinsohn and his colleagues developed and refined an integrative model of depression (e.g., Lewinsohn, 1976; Lewinsohn & Gotlib, 1995). The main tenet of this model is that a low rate of positive reinforcement in the person's environment is an antecedent for depressive states. In other words, if a person is, for various reasons, unable to derive pleasure and satisfaction from his/her daily life, he/she presents high risk for negative affect. An environment that is lacking in reinforcement can occur as a result of many situations and many person-environment factors. However, a negative life event, such as bereavement or disability, can set in motion a series of situations where a person's environment can lack in positive reinforcement and become fraught with daily hassles. Certain negative life events, such as disability, restrict the potential for corrective behaviours. That is, due to the presence of functional impairment, behaviours which were previously reinforcing are no longer possible. A vicious cycle is then created, where an antecedent negative event reduces the level of response-contingent reinforcement and culminates in negative affect. The model further explains that a state of dysphoria can also add to activity restriction and low initiative. The opportunity of developing new compensatory skills is limited, because of the low responsiveness associated with depressive states (e.g., low energy and apathy). Lewinsohn and colleagues believe that a reinstatement of positive activities may interfere with this downward spiral of depression and inactivity.

In a more recent conceptualization of this theory, Lewinsohn and Gotlib (1995) recognize the multifacetedness of depression as a syndrome. These authors discuss the role of such issues as personality and dispositional factors, the unique aspects of late-life depression, and the cognitive and emotional consequences of low mood. The model has also been extended to special populations such as the elderly. As will be presented in more detail later, there is accumulating evidence that both cognitive and behavioural treatments are successful in relieving depression in older individuals (see Teri, Curtis, Gallagher-Thompson, & Thompson, 1994).

In a similar manner, Gurland and colleagues (Gurland et al., 1988) suggest that treating depression as the primary condition is likely to aid in the degree and rapidity of recovery from existing disability. That is, effectively treating depression may be protective against the deterioration of disabling conditions. In this vein, these authors propose that certain intervention modalities address both depression and disability. Cognitive and behavioural treatments are cited as examples. Many of the behaviours and/or cognitions targeted in treating depression are also involved in recovery from and coping with disability conditions. For example, the treatment regimen of behavioural therapy for depressed elderly almost always aims to improve activity level, and hence social involvement, social support, and the level of reinforcement in everyday activities. As well, cognitive and behavioural interventions for depression set increased confidence and self-mastery as primary goals in treating depression and circumventing relapse. Further, improved coping and the development of compensatory behaviours challenges hopelessness and helplessness. A combination of improved coping, social reinforcement,

pleasant activities and feelings of control may contribute positively to recovery from depression. In other words, a successful rebuilding of a reinforcing environment and meaningful everyday life may minimize the detrimental effects of physical disability on mood and minimize the risk of further functional impairment.

In the following section, the efficacy of therapeutic intervention for older adults will be reviewed, with special attention to behavioural and cognitive-behavioural intervention.

The Efficacy of Therapeutic Intervention for Older Persons

The myth that older adults are inappropriate candidates for psychotherapy has been empirically dispelled. Researchers and clinicians find that depression in late life is not as resistant to treatment as often believed. In a recent review of empirically validated psychological treatments for older adults, Gatz and her colleagues (Gatz, Kaskie, Kasl-Godley, McCallum, & Wetherell, 1998) found that cognitive-behavioural and behavioural treatments for depressed older adults demonstrate effectiveness. There are a number of pivotal, well-controlled studies that support the efficacy of cognitive-behavioural and behavioural intervention for older persons.

In a study by Steuer, Mintz, Hammen, Hill, Jarvik, McCarley, Motoike, and Rosen (1984), a sample of depressed community elders was assigned to either a cognitive-behaviour or psychodynamic group therapy. Both groups demonstrated a statistically significant reduction in observed and subjective depression. In a similar effort, Thompson, Gallagher, and Breckenridge (1987) conducted a study in which elders diagnosed with major depressive disorder were assigned to behavioural, cognitive, brief

psychodynamic psychotherapy, or a delayed treatment control. Their results suggest that older adults participating in psychotherapy showed improvements over and above those observed in the control group. Seventy percent of clients across intervention groups showed a favourable response to treatment. Thompson and colleagues (1987) argue that these results support the efficacy of psychotherapy in the treatment of depressive older adults, and compare well with results reported for younger clients.

In an attempt to empirically validate some of these claims, Gallagher and Thompson (1982) introduced cognitive, behaviour, and insight therapy to 30 elderly clients with a diagnosis of major depressive episode. All subjects taking part in any of the three treatments showed substantial alleviation of depressive symptoms. Interestingly, however, a follow-up conducted 12 months later revealed that cognitive and behaviour therapy recipients manifested greater long-term improvements. It is possible, as suggested by the authors, that the educational approach of cognitive therapy and the active orientation of behavioural interventions allow older persons to continually apply skills learned in therapy to the management of their daily lives. This indeed suggests that behavioural and cognitive therapy may present an advantage for the treatment of older persons.

Although many elders receive pharmacological rather than psychotherapeutic treatment, the latter has demonstrated some advantages. In a study conducted by Beutler, Scogin, Kirkish, Schretlen, Corbishley, Hamblin, Meredith, Potter, Bamford, and Levenson (1987), elderly clients were assigned to various drug-psychotherapy combinations: cognitive therapy only, alprazolam only, cognitive-alprazolam

combination, and placebo control. All subjects in the intervention conditions (including drug-psychotherapy combinations) showed greater improvements than those assigned to the placebo group. However, a closer examination of the data revealed that elders who received cognitive intervention, whether alone or in combination with drug therapy, showed greater reduction in depressed affect than those receiving pharmacotherapy only. These findings indicate that improvements detected in cognitive therapy recipients extend over and above medication effects. The gains made by cognitive therapy participants were maintained at 3-month follow-up. In addition, the authors reported that older clients participating in cognitive therapy were less likely to prematurely terminate treatment than those assigned to the alprazolam-only treatment.

The issue of intervention suitability has often been raised with respect to the treatment of older adults. Given the unique characteristics of this age group and the nature of the disorder, many practitioners and researchers in the area of gerontology have recommended cognitive and behaviour therapies as the treatment of choice for elderly depressives (e.g., Fry, 1984; Emery, 1983; Emery & Leshner, 1982). The notion that interventions based on cognitive and behavioural principles are uniquely suited for the treatment of elderly depression has been well considered, both theoretically and empirically. There are several significant issues to consider: adaptability of the intervention to the circumstances of the older individual, suitability of the intervention for treating late-life depression, and consistency of the intervention with the goals of successful ageing.

The goal-oriented and present-focused nature of behaviour and cognitive therapy renders the intervention especially adaptable to the needs of the aged. For example, it has been suggested that stereotypes about ageing, low self-esteem associated with role loss, self-blame, inability to cope, hopelessness, and helplessness can all be challenged via cognitive and behavioural techniques (Steuer & Hammen, 1983; Morris & Morris, 1991). In addition, Glantz (1989) suggests that a great deal of depression experienced in later life is a direct consequence of faulty perceptions or unrealistic standards. For instance, failure to recognize and accept the normal decline in physical power that accompanies ageing may cause an incongruence between ability and expectations, and may impede compensatory behaviour which tends to be operative in maintaining an active life. Similarly, life events such as retirement and role loss may engender feelings of worthlessness. Such issues can be specifically targeted by cognitive and behavioural interventions. The goal would be to offer a feasible behavioural alternative, which in turn would modify cognitions of incapacity and hopelessness. Glantz (1989) also states that a unique feature of behavioural intervention is that the elderly client is invited to approach complicated problems at a manageable pace, which increases the probability of initial success and the ensuing sense of achievement. Further, the interactive nature of behavioural treatments permits the older client to feel valued and respected. Moreover, this approach allows therapy to empower the older person and helps coping with the numerous life events associated with ageing (e.g., disability and financial decline) which deplete the older person's sense of control.

Efficacy of Treatment Models Modified for Older Adults

The first efforts to modify traditional therapy for use with older adults have appeared in the literature (e.g., Scogin, Hamblin, & Beutler, 1987). The rationale behind these efforts was to create an intervention model that is uniquely suited for older persons. The application of cognitive and behavioural interventions has been taken even further in addressing the problem of depression in late life. New methodologies have focused on efficacy and cost-efficiency. Adaptations have primarily taken two forms: self-administration of treatment and delivery by non-mental health care professionals. Results of such efforts have been promising.

Some of the work in this area involves the development of self-administered treatments based on demonstrably efficacious interventions, such as cognitive and behaviour therapies. For example, Scogin et al. (1987) attempted to introduce a more deliverable alternative to depressed older adults by offering a bibliotherapy program (i.e., using written material as a form of treatment) to 29 community-dwelling individuals aged 60 years or older. Participants were assigned to one of three treatment groups: bibliotherapy condition, control-bibliotherapy condition (this group was assigned neutral reading material), and a delayed treatment control. Individuals taking part in the bibliotherapy condition received a copy of Feeling good: The new mood therapy (Burns, 1980). The reported findings indicated a significantly greater decrease of depressive symptoms in the bibliotherapy condition, when compared to the delayed and attention-control treatment conditions.

In a subsequent work, Scogin, Jamison, and Gochneaur (1989) compared cognitive and behavioural bibliotherapy by assigning either Feeling good: The new mood therapy (cognitive therapy; Burns, 1980) or Control Your Depression (behaviour therapy; Lewinsohn, Munoz, Youngren, & Zeiss, 1986). Sixty per cent of subjects offered treatment showed clinically significant improvements. However, the authors found no specific effects associated with either the cognitive or behavioural treatment. This is not a surprising outcome, especially in light of the growing recognition of the conceptual and applied overlap between cognitive and behavioural treatment strategies (e.g., Lewinsohn & Gotlib, 1995). Clients of both types of bibliotherapy were able to maintain treatment gains at a 6-month follow-up.

More recently, Landreville and Bissonnette (1997) offered a program of self-administered cognitive bibliotherapy to a group of community older adults with functional disability. Participants were assigned to either a 4-week treatment group or a delayed treatment control condition. Outcome indicated that those taking part in the treatment showed improvements in depressive symptoms. These gains were maintained six months later. Interestingly, although functional disability did not appear to show immediate response to treatment, improvements were detected at the 6-month follow-up evaluation. Perhaps this is not a surprising finding, given that life changes impacting functional capacity may occur over a long period of time.

Some researchers have further developed the minimal-contact model by training non-mental health care professionals to deliver therapeutic intervention. For example, Thompson, Gallagher, Nies, and Epstein (1983) developed a psycho-educational program

based on behaviour therapy techniques geared towards depressed elderly. The treatment was delivered on a weekly basis in a group setting (announced as class meetings). Class leaders were either professionals (i.e., education ranging from B.A. to recent Ph.D. graduates in mental health care) or non-professionals (i.e., volunteers and personnel from senior centres). Both volunteers and mental health care professionals received the same amount of training, which consisted of eight, 3-hour training sessions given on a weekly basis. Results revealed that participants in both groups showed a significant reduction in depressive affect, as well as a significant increase in life satisfaction and pleasant events. Thompson and colleagues also reported on the differential effects of instructor qualification: there were no significant differences between groups in dropout rate or depression levels, as measured at the end of the program. Indeed, participants tended to rate paraprofessionals as warmer and more empathic than professionals.

In a similar study, Lichtenberg, Kimbarow, MacKinnon, Morris, and Bush (1995) developed a behavioural intervention for depression in a medical rehabilitation setting. Recognizing the link between disability and depression, these researchers designed this treatment to fit the short-term stay of rehabilitation patients, and trained physical, occupational, or speech therapists to deliver it to elderly clients. Case illustration indicated that the treatment was successful in reducing depression.

Taken together, the outcomes of this research are key in shaping the future progress of alternative treatment models. The implications are twofold. First, there is evidence that cognitive- and behaviour-type interventions retain their therapeutic efficacy when delivered in a self-administered format, specifically as bibliotherapy (e.g., Scogin,

1997; Scogin et al., 1987; 1989; Cuijpers, 1998). Meta-analyses performed to date find that effect sizes for bibliotherapeutic treatments for depression range from .76 to .82 (see Scogin, 1997). Second, these findings also suggest that the minimal contact nature of bibliotherapy does not adversely affect outcome. Individuals with little or no training in mental health care can deliver cognitive and behaviour treatments and obtain efficacious outcome. Scogin (1997) presented researchers in the area with a challenge to apply bibliotherapy in innovative ways in order to meet the pressing needs of older individuals. He believes that a minimal-contact model is a positive progression in service delivery, in addition to being cost-effective, efficacious, flexible, and carrying high outreach potential.

This paves the way for additional work which endeavours to further develop and refine this model. Of particular interest is the high risk population of home-bound disabled depressed older persons living in the community. The most important question becomes how to design a model that overcomes the difficulties experienced by depressed older adults, especially when depression and functional impairment co-exist. In the next section we will review some of the unique difficulties facing this high risk population.

Barriers to Care for Depressed Older Adults with Functional Impairment

The question of care delivery is especially complex when considering late-life depression. Neiderhe (1997) argues that adequate care delivery must incorporate a combined-strategy, multi-disciplinary, and customized approach. It is necessary to recognize the obstacles to mental-health care in the elderly in order to devise a sound solution.

There is evidence that depression in older individuals may be an under-recognized syndrome. Blazer and Williams (1980) reported that of those experiencing depressive affect, 1% actually received counselling. Waxman and Carner (1984) studied a sample of elders who were clients of a geriatric medical practice ($N=140$) and found that 22% showed mild to moderate psychiatric disorder, but only 9% of those (2% of the total sample) were, at the time of the study, consulting with a mental health care professional. Cheah and Beard (1980) reported that in their sample of depressed older medical inpatients, under 4% of cases were appropriately diagnosed.

Similarly, in a multi-site study, German, Shapiro, and Skinner (1985) reported that older individuals with mental disorders are much less likely than younger persons to receive appropriate care. In their sample, only 4.2% of those between the ages of 65 and 74 had made a visit to a mental health care professional, and, of those aged 75 and over, there were no consultations. In contrast, 8.7% of those under 65 years of age received counselling.

This apparent under-recognition might be a result of a confusion between the presentation of depression and that of other chronic medical conditions. Many older adults consider the experience of depression to be an expected biological consequence of ageing. Such depressive symptoms as insomnia, depleted energy levels, inability to concentrate, forgetfulness, and appetite disturbance might be erroneously regarded by older persons (and health care professionals) as irreversible ageing (Thompson, Davies, Gallagher, & Krantz, 1986). Consequently, many aged persons suffering from depression may be satisfied with a medical explanation and a pharmacological treatment for their

symptoms, and may hesitate to pursue mental health care. Indeed, drug treatments for older adults are a highly prevalent treatment modality for psychiatric disorders. Nearly, 80% of older persons diagnosed with a psychiatric condition are treated only pharmacologically (Burns & Taube, 1990). The risk of polypharmacy increases if a health condition requiring medication is also present. Some of the problems arising are medication tolerance and possible toxicity, withdrawal symptoms (e.g., anxiety) associated with discontinuation, and lack of perceived personal control over the problem (Niederehe, 1997).

It is possible that there are many social, economical, and practical impediments that diminish the older individual's access to appropriate mental health care. Many older adults tend to be disinclined to seek psychological treatment, because of the various negative stereotypes associated with mental illness (Glantz, 1989). Waxman and colleagues (Waxman, Carner, & Klein, 1984) report that many older persons refuse referrals to a mental health care professional. Many older adults feel there is a stigma attached to being a client of mental health services. This is especially true of today's elderly who, as a generation, were less exposed to mental health awareness. There seems to be a general fear in this cohort of being labelled "crazy" or "senile" -- labels that may consequently lead to institutionalization (Emery, 1981) and loss of independence, competence, and control over life decisions.

In addition, for many older persons, especially those who suffer from a medical condition, the problems of correct diagnosis and access to treatment become compounded by possible disability. For some elders, mobility is limited. Consequently, they may find it

increasingly difficult to present at the therapist's office or a community centre on a regular basis. In considering these issues, it is evident that medically ill, potentially home-bound older adults may be particularly vulnerable to neglect their mental health care. The under-utilization of mental health services by older adults is regrettable, especially in light of extensive evidence that therapeutic intervention is effective for the majority of depressed older persons. In the next section we will delineate the features of a new service delivery model designed to extend intervention to a particular high risk group: depressed older persons with functional impairment.

Meeting the Needs of Older Persons: Features of a New Model

Empirically validated interventions models are certainly available for depressed older persons (Gatz et al., 1998). The efforts of researchers in the area have produced a great deal of useful information and empirical support for the treatability of depression in older persons. In addition, studies have also shown that efforts to modify existing psychotherapeutic modalities to fit the needs of older persons have been successful. Also, delivery issues have been carefully considered by researchers. Our interests focus on depressed older adults with functional impairment. Our goal is to develop and implement a service delivery model that would sufficiently address a broad number of issues: service delivery gap, under-utilization, efficacy and efficiency, and acceptability. In addition, we intend to address two issues which appear frequently in the literature. The first is the inclusion of functional impairment as part of the symptoms complex in depressed older persons with disability. Pearson, Reynolds, Kupfer, and Lebowitz (1995), in a reply to the 1991 NIH Consensus Development Conference on the Diagnosis and Treatment of

Depression in Late Life, reported that an adequate assessment of treatment outcome for late-life depression must include measures of treatment impact on functional ability. Moreover, they reported that an efficacious treatment must take into consideration a broad range of personal information, such as family history, living context, resources, and quality of life. The second area that requires exploration is the process of change. Some researchers point out that little attention has been paid to the impact of situation-specific factors on treatment outcome in late-life depression, and that the actual components of what is “effective” are largely unknown (e.g., Niederehe, 1997; Scogin, 1997).

The Present Study

Objectives

This study was designed to create and implement a care delivery system for underserved depressed elderly. The broad goal of this work was to develop a form of intervention tailored to meet the needs of older adults that can transcend barriers and facilitate delivery of service (as discussed above). This model was designed to optimize therapeutic effectiveness, modified to suit the needs of older persons, and our research design was chosen to fit both theoretical and applied necessities of this work. Each of these points will be discussed in turn.

Intervention modality. The literature discussing the co-occurrence of depression and functional impairment strongly suggests that activity restriction and low levels of reinforcement are core in creating and maintaining negative affect, and possibly add further risk for disability (e.g., Zarit et al., 1999). A behavioural treatment was chosen because of its particular suitability to older adults who are suffering from the combined

affliction of depression and functional impairment. Our intervention is largely based on Lewinsohn, Munoz, Youngren, and Zeiss' (1986) Control Your Depression and is designed in a bibliotherapy format. That is, the therapeutic material is delivered to participants in the form of written material. Selected material from the original was abridged and simplified to approximately a grade-five reading level in order to improve readability for older persons who may have difficulty concentrating or may have modest education. This simplification and abridging was done to minimize participant attrition, reported in similar studies with bibliotherapy (Scogin, 1997). Older participants may feel overwhelmed by bibliotherapy material that is difficult to comprehend or lengthy. Sessions, including exercises, ranged from three to four pages, written in large font. The model was designed for self-administration in six sessions, with a suggested rate of one session per week. The actual content of the sessions and the objectives for each session are included in appendices C and D.

Choice of design. The multiple-baseline format was chosen because of its high suitability for this work. There are four major advantages to using this format. First, at this stage where there is substantial literature supporting the efficacy of behavioural techniques and self-administered behavioural therapy (e.g., Landreville & Bissonnette, 1997), end point outcomes have been sufficiently addressed. Many researchers in the area suggest that an attention to situational factors and behavioural patterns is the best tool for improving understanding, treatment, and even prevention of late-life depression; (Niederehe, 1997). This type of behavioural analysis is rooted in single-case methodology (Kazdin, 1998) and hence was chosen for its suitability to our research questions and its

conceptual fit with applied analysis of behaviour. Second, among the various forms of single-case designs, a multiple-baseline format was chosen because it is both difficult and unethical to reverse the effects of treatment in a study such as this (i.e., to return participants to baseline depression). Multiple-baseline designs can demonstrate effects of intervention without having to return participants to baseline levels of depression. Moreover, this design provides a natural control comparison across subjects. Third, this approach allows data-driven flexibility. That is, continuous adjustments to the intervention take place to improve efficacy before it is extended. This would improve intervention procedures and take into account person-specific factors (e.g., nature of disability, level of energy, etc.). Fourth, a detailed analysis presents an appealing way to strengthen our understanding of an extremely heterogeneous group. Older adults, perhaps more than any other group, can present with diverse life circumstances (health, behavioural patterns, cognitive abilities, functional ability, attitudes, number of daily hassles, social resources, etc.). It has become apparent that these are serious challenges that must be addressed by models of treatment (Friedhoff, 1994). A detailed behavioural analysis allows for the unique person-environment formula to enter into the treatment as an important source of information, rather than error.

Choice of alternative service delivery. It has become necessary to use paraprofessionals and organizations linked to under-reached populations to bridge the service gap. In order to overcome barriers to access (as discussed above) this treatment was designed for delivery by paraprofessionals who provide a community link to underserved older persons suffering from a serious medical condition and functional

impairment and depression. For example, disabled older adults, who are assisted by home-care agencies or medical-aid programs, but who are unlikely to seek psychological care, can nonetheless benefit from interventions delivered through such channels. For this work, we chose a home-care medical delivery organization active in the Ottawa-Carleton area – The Victorian Order of Nurses (VON). There are two primary reasons for collaborating with the VON. First, in view of the inaccessibility of traditional mental health care to this population, the VON nurses are an ideal professional link and can be a suitable alternative for delivering necessary intervention. In this case, medical nurses were chosen because of their already extensive involvement with elders in a care delivery context. Further, the VON personnel enjoy a strong rapport with their clients and can easily incorporate a psychological treatment as a new element in already established routines. Second, the nurses' role in assisting a therapy program might create a socially acceptable treatment medium for those elders skeptical of psychological interventions and, as previously noted, who have a distinct preference for the medical model. The specifics of our methodology will be discussed under procedure.

The fundamental goal of this program was to effectively reduce depression in participants. The second aim of the program was to explore whether improving mood would affect functional impairment. Third, the research examined the workability of a community-based intervention program, delivered by para-professionals to an otherwise difficult to reach population. This work may have implications for developing a general framework for services delivered by community resources. We attempted to accomplish these three goals in a manner acceptable to older adults and their caregivers.

Consequently, the program was developed with particular sensitivity to the needs of older individuals and was further aimed at increasing self-efficacy and psychological self-management.

Hypotheses

It was predicted that the program would successfully reduce depression in participants in a meaningful way. This improvement may be indicated at the diagnostic level, where participants who initially received a diagnosis of mood disorder no longer meet structured diagnostic criteria. Improvement may also appear as a clinically significant reduction in the severity of depressive symptoms.

Given the relationship, albeit disputed in terms of direction of causality, between depressed mood and functional impairment, it was also predicted that a reduction in depressive symptoms would lead to a secondary gain in functional capacity. Functional capacity was defined as a combination of self-care capacity, social functioning, and subjective perceptions of health status and ability.

METHOD

Participants

Individuals taking part in the study were older adults, aged 65 and over, who were clients of the Victorian Order of Nurses (VON). All participants in the study were referred by the VON for problems with depressive symptoms. At the time of the referral and intervention, participants were receiving home medical care by the VON nurses for a variety of chronic and acute health problems (e.g., surgical patients requiring after care, diabetic treatment, post-chemotherapy, etc.). The study consisted of three series, each containing two participants, for a total of six complete cases. The complete information profile will be provided for participants in each series.

Inclusion/exclusion criteria. Participants were referred to the program by the VON for depressive symptoms having a significant effect on functioning (see review of instruments for cut-off scores on depression indices). Individuals receiving other forms of psychotherapeutic intervention were excluded from the study, with the exception of those who had been stabilized on pharmacological treatment for a period of no less than eight weeks and were seeing a psychiatrist for medication management. Other exclusion criteria included definitive cognitive impairment (see instruments for cognitive evaluation) and serious suicidal tendencies. It should be noted that none of the participants who took part in the study experienced interruption to medical services offered by the VON during the course of the intervention.

Instruments

Cognitive Functioning

The Modified Mini-Mental State Examination. Completion of the treatment package required a good level of cognitive functioning, because individuals with serious cognitive deficits may not be able to benefit from this type of intervention. The Modified Mini-Mental State Examination (3MS; Teng & Chui, 1987) is a paper-and-pencil test designed to screen for cognitive deficits. It represents an advanced version of the Mini-Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975), on which it was based. The 3MS expands the range of scores of the MMSE from 0-30 to 0-100 points. The MMSE scores can be extracted from administration of the 3MS. The 3MS assesses functioning in the following domains: orientation to time and place, registration, attention, memory, language, and visual construction.

Literature based on the MMSE shows satisfactory internal consistency, test-retest and inter-rater reliabilities. Anthony, LeResche, Naiz, Von Kroff, and Folstein (1982) found that in a sample of elderly patients without a diagnosis of dementia or delirium ($n=56$), test-retest reliability over a 24-hour interval was .85. In a more recent study, O'Conner, Pollitt, Hyde, Fellows, Miller, Brook, and Reiss (1989) administered the MMSE twice over an eight-week period to a sample of 2302 elderly patients registered in a general practice and reported an overall test-retest reliability of .85. Inter-rater reliability reported using unweighted kappas ranged from .85 to 1.00 with a mean of .97 (Folstein et al., 1975; O'Conner et al., 1989). Reports of internal consistency (alphas) ranged from .56 to .65 (see Tombaugh & McIntyre, 1992). Sensitivity of the scale for detecting cognitive

impairment (using DSM-III as a criterion) ranged from 100% to 69%. Similarly, specificity (using DSM-III as criterion) ranged from 100% to 46% (see Tombaugh & McIntyre, 1992 for a review). Comparable reports were made when using clinical assessment as an external criterion. Similarly, the 3MS has been reported to have adequate psychometric properties. Inter-rater reliability using Kappa statistic was reported at .67 (Lamarre & Patten, 1991). Further, test-retest reliability (retested within 36 hours) for a sample of emergency and hospital inpatients ($n=20$) was extremely high ($k=1$). A score of 80 points or less would be indicative of a substantial degree of cognitive dysfunction and would warrant exclusion (Lamarre & Patten, 1991).

Depression

Depression was assessed by multiple instrument, each with a specific purpose. The Nurses' Observation Scale for Geriatric Patients was used to guide nurses in identifying depression in their clients and make appropriate referrals to the program. This instrument is designed for use by medical professionals. The Structured Clinical Interview for the DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 1995) was used to identify a DSM-IV based diagnosis of participants before and after treatment, and at follow-up. The Geriatric Depression Scale (GDS; Brink, Yesavage, Lum, Heersema, Adey, & Rose, 1982) was used to obtain self-report information from participants on their mood. The Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960) was a guided interview used as an index of symptom severity.

The Nurses' Observation Scale for Geriatric Patients. The Nurses' Observation Scale for Geriatric Patients (NOSGER; Spiegel, Brunner, Ermini-Funfschilling, Monsch,

Notter, Puxty, & Termmel, 1991) has been constructed for use by non-trained medical personnel (or family members) to assess several areas of functioning in geriatric populations (e.g., memory, self-care, mood, social behaviour, and disturbing behaviour). Only the mood items were used in the present study, in combination with two additional items constructed for the purpose of this work. The added items assessed reported loss of pleasure, and fatigue or lack of energy. This modified form of the scale essentially served as an aid to the VON nurses for the initial identification of possible mood disorders among their clients. Clients who were observed to show low mood, loss of pleasure and energy were approached and, with their permission, referred to the program.

The scale has shown adequate psychometric properties. In a study by Brunner and Spiegel (1990; cited in Spiegel et al., 1991) three groups of 20 elderly persons ($N=60$) were assessed by two independent groups of raters, the second group assessing only 32 subjects of the total sample. A one-month follow-up was conducted with 30 subjects in order to assess test-retest reliability. The results showed that all coefficients correlations between raters ranged between 0.70 to 0.90. However, it should be noted the correlation for mood items was slightly low ($r=0.6$) due to sample characteristics unrelated to the scale. Spiegel et al. (1991) comment that most subjects in the sample were non-depressed, which created a restricted variability, thereby lowering statistical inter-rater reliability. Subsequent work demonstrated correlations between 0.79 and 0.89 for the mood scale (Spiegel et al., 1991). Test-retest reliability was reported to range between 0.80 and 0.90 (Spiegel et al., 1991). Brunner and Spiegel (1990; cited in Spiegel et al., 1991) tested the

concurrent validity of the NOSGER and found that the mood factor correlates highly with the GDS.

The Structured Clinical Interview. The Structured Clinical Interview for the DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 1995) was used as both a screening and a diagnostic instrument. The SCID is a semi-structured interview containing nine modules, seven of which represent the Axis I DSM-IV diagnoses. The first part of the SCID is an overview section, designed to gather demographic data, psychiatric and treatment history, and general functioning information. The SCID uses a decision-tree strategy, whereby consecutive diagnostic hypotheses are evaluated. That is, if a required criterion is not met within a given diagnostic module, the interviewer is instructed to bypass irrelevant questions and move on to the next criterion. The Mood disorders module was administered to participants and can be completed in 20 minutes. The final output of the SCID includes a summary sheet that is completed after the interview. This synopsis consists of a record of the principal diagnosis and the associated degree of severity based on the DSM-IV criteria.

The test-retest reliability of the SCID for DSM-III-R has been tested in a multi-site study with a large sample ($N=592$) in four patient and two non-patient sites (n s are 390 and 202, respectively) (Williams, Gibbon, First, Spitzer, Davies, Borus, Howes, Kane, Pope, Rounsaville, & Wittchen, 1992). Test-retest assessments were conducted in a way that is comparable to application of the SCID in actual practice. Williams et al. (1992) reported that for the majority of diagnostic categories (e.g., alcohol abuse, mood disorders, and schizophrenia), K s for current episode or lifetime occurrence were above

.6, with the mean K reported at .61. These findings are based on combined patient sites. However, data generated by the non-patient sites indicated average Ks of .37 and .51, for current episode and lifetime incidence, respectively.

Some researchers have reported reliabilities for individual modules of the SCID. For example, Riskind, Beck, Berchick, Brown, and Steer (1987) reported obtaining a K of .79 for current diagnosis of major depression, based on videotaped interviews of the SCID.

Geriatric Depression Scale. The Geriatric Depression Scale (GDS; Brink, Yesavage, Lum, Heersema, Adey, & Rose, 1982) was developed and validated to evaluate depressive symptomatology in older adults. This instrument has the advantage of brevity, can easily be self-administered, and is suitable for repeated use. The purpose for its inclusion in this study was to monitor weekly levels of depression.

The GDS is comprised of 30 true/false items, which are answered for “the past week including the day of the test.” Leshner (1986) administered the GDS to nursing home elderly and reported high internal consistency, split-half, and test-retest reliability (.99, .84, and .94; respectively). Subsequent research by Dunn and Sacco (1989) also reported a similar reliability trend with a sample of community-dwelling elders (N=439). Brink et al. (1982) found that at a cut-off score of 11 the GDS has a sensitivity rate of 84% and a specificity rate of 95%. Similarly, using the same cut-off score with a sample of medical inpatients Rapp, Parisi, Walsh, and Wallace (1988) reported sensitivity and specificity rates of 70% and 89%, respectively. More recently, Shah, Phongsathorn, George, Bielawska, and Katona (1992) found at the conventional cut-off GDS shows a

sensitivity of 80% and a specificity of 64%. Burk and colleagues (Burk, Nitcher, Roccaforte, & Wengel, 1993) found the GDS had adequate agreement with independent clinical diagnosis. Stiles and McGarrahan (1998) reported in a review of published information regarding the GDS, that it was generally found that sensitivity and specificity remained around 80%, indicating good psychometric properties.

In addition to using the GDS for weekly assessment, item 16 was used to create a 9-point Likert-type scale which was used by participants to rate their mood daily. The following categories comprised the 9-point scale: “extreme sadness” (1), “always sad” (2), “often sad” (3), “some sadness” (4), “neutral” (5), “fair” (6), “good” (7), “very good” (8), and “great mood” (9). Participants were instructed to complete this mood item once a day at the same time of day (preferably at bedtime).

The Hamilton Rating Scale for Depression. The Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960) was constructed to assess severity of depressive symptoms (mood, suicide, work and loss of interest, agitation, somatic symptoms, appetite and weight disturbance). The HRSD contains 21 items, but it is recommended that a total score be computed on the basis of 17 of the test questions (Hamilton, 1960). The reason for using the HRSD at pre-treatment was to provide an additional source of information regarding the level of depression in participants and an index of change over time.

Hamilton (1960) found high inter-rater reliability ($r=.9$), comparing the ratings of two raters for 70 patients, using the 17-item HRSD. Williams (1988) reported test-retest reliability to be at .81 and .82 for the 17- and 21-item protocols, respectively.

Scores between 0 and 6 indicate no depression or “recovered,” 7 to 17 indicates mild depression, 18 to 24 indicates moderate depression, and scores greater than 25 mark severe depression. A cut-off of 12 points was used for inclusion in the study.

This scale was also used to examine the clinical significance of changes in depression as a result of the intervention. The norms for change scores on the HRSD, necessary for a clinically meaningful improvement, are taken from Jacobson and Truax (1991).

Health and Functional Autonomy

The OARS. The OARS Multidimensional Functional Assessment Questionnaire (OMFAQ; Fillenbaum & Smyer, 1981) includes subscales that assess physical health, social resources, and activities of daily living. This instrument considers a wide scope of functioning: scores indicate a range from excellent to poor functioning on various dimensions. Also, included in the questionnaire is a six-point Likert-type summary scale, completed by the interviewer, which covers the individual's overall functioning. Changes in functional capacity over time may be reflected on the Activities of Daily Living subscales of the OMFAQ and social initiative may be reflected in the Social Resources subscale.

Fillenbaum and Smyer (1981) evaluated the inter-rater reliability of the Physical Health subscale of the OMFAQ. Inter-rater reliability and scale validity were found to be adequate. Inter-rater reliability, obtained through inter-class comparisons of 30 cases rated by 11 raters, was reported at .66, .82, .86, for the Physical Health, Social Resources, and Activities of Daily Living Subscale, respectively. In a separate sample ($N=33$),

Fillenbaum and Smyer (1981) validated the physical health and activities of daily living subscales against ratings made by physicians. Level of agreement between the Physical Health of the OMFAQ and the criterion rating was reported at .75 and .82, using both Kendall's tau and Spearman's rank order correlation respectively. Similarly, the Activities of Daily Living showed equivalent agreement indices, which were reported at .83 and .89, for Kendall's tau and Spearman's rank, respectively.

The Functional Autonomy Measurement System. The Functional Autonomy Measurement System (SMAF; Hebert, Carrier, & Bilodeau, 1988) was used to assess the extent of the needs and activity impairment in elders (based on the World Health Organizations' classification of physical impairment). The SMAF consists of 29 items, each measured a 4-level scale, i.e., complete autonomy (0), requires supervision (-1), requires help (-2), and total dependence (-3). The scale assesses five facets of activity: Activities of Daily Living (7 items with a maximum disability score of -21), Mobility (6 items with a maximum disability score of -18), Communication (3 items with a maximum disability score of -9), Mental Functioning (5 items with a maximum disability score -15), and Instrumental Activities of Daily Living (8 items with a maximum disability score of -24).

The administration of the SMAF requires 40 minutes on average. Adequate psychometric properties have been reported for the SMAF by Hebert et al. (1988). Interrater reliability was calculated for 12 nurses and 18 social workers, based on a sample of 146 elders from a chronic home-care program. Weighted Kappas ranged from .52 to .75. In the same study, an investigation of validity was conducted by correlating the SMAF

with the amount of nursing-care time required. High correspondence between the SMAF and required nursing care time was reported (Pearson $r=.88$).

The SMAF provides an indication of the participants' general functioning and level of disability at the time of evaluation.

Procedure

First Interview

This part of the assessment package was designed to serve several functions: information guide, pre-treatment evaluation, and evaluation of broad and specific outcome variables. First, VON clients suspected of suffering from depressive affect, as identified by the VON nurses using the modified NOSGER, were invited to take part in the project on a volunteer basis. Potential participants were offered an information package which consisted of a summary and rationale of the study, as well as a consent form (see appendices A and B, respectively). This information package served as an introduction to the program for the purposes of recruitment. Also reading ability was informally assessed by asking participants to read aloud the consent form. Second, participants who accepted to participate were seen for a first interview. This interview and all subsequent interviews were conducted under supervision from a registered psychologist. This purpose of this interview was the determination of participant suitability for the study, as previously discussed. The screening assessment package included the Mini-Mental State Examination (Folstein et al., 1975), Structured Clinical Interview for DSM-IV (Spitzer et al., 1995), and the Geriatric Depression Scale (Brink, et al., 1982).

Second Interview: Pre-treatment

All participants who met the diagnostic and inclusion criteria of the study were given a second assessment prior to commencement of treatment. Considering the age and health status of the participants, a second interview was deemed necessary in order to keep individual meetings relatively short and assess additional variables of interest. This interview was scheduled within a few days of the initial screening. The second assessment package included the Hamilton Rating Scale for Depression, the OARS Multidimensional Functional Assessment Questionnaire, and the Functional Autonomy Measurement System.

On-going Assessment During the Baseline and Treatment Period

During the baseline and treatment periods, participants were asked to independently complete a single daily item rating their mood (modified mood item from the GDS) and the full GDS each week.

Post-treatment Assessment

This assessment directly followed treatment, for the purpose of evaluating the subjects' overall affective and functional status. This assessment was also given in an interview format and included the SCID (depression module), GDS, the health, social resources (only series B & C), and activities of daily living sub-scales of the OMFAQ (only series B & C), and the SMAF.

Follow-up Assessments

Assessment took place at three months following the end of treatment. Subjects were contacted and interviewed at their homes (with the exception of one subject who

preferred a telephone assessment and sent his GDS by mail). The follow-up assessment included an administration of the SCID (depression module), GDS, the health ,social resources (only series B & C), and activities of daily living (only series B & C) sub-scales of the OMFAQ, and the SMAF.

Suicide Management Protocol

The VON procedures for managing suicidal persons (Victorian Order of Nurses, 1991) were used by both nurses and the research team. Although procedures according to the guidelines would be initiated when required, some of the elements delineated in the manual are of particular importance and were mentioned to participants. First, the older person would be informed that his/her physician would be contacted and that he/she could choose to be present. Second, if suicide were to become an issue, the client would be advised that hospitalization was an option and that, if he/she agreed, emergency hospitalization would be arranged. In addition, efforts would be made to recruit significant others willing to remain with the individual depending on the elder's decision. In addition to these guidelines, VON nurses were also asked to share the information with the researcher should suicidal tendencies of any program client come to their knowledge during the treatment period.

Intervention Personnel

The Victorian Order of Nurses (VON) is an agency serving the under-reached elderly. Although their assistance is medical in nature, the agency maintains a close link to a sub-population of elders who are particularly vulnerable to developing depressive disorders.

Description of VON personnel. This nation-wide agency operates a branch in the Ottawa-Carleton area. The VON personnel are health care professionals, typically registered nurses, who deliver the service at the client's home. Medical services are extended to older persons who no longer require hospitalization for their medical condition, but who need outpatient health-care maintenance. The nature of the service itself varies according to the client's needs. The specialized caregivers include enterostomal therapists, home dialysis specialists, and palliative care nurses. The VON nurses do not customarily receive any formal schooling or professional training in mental health care.

VON nurses who participated in the study were sufficiently familiarized with the symptomatic manifestations of depression during training and subsequently made referrals to the program for clients suspected of suffering from depressive affect. These clients were then introduced to the rationale and goals of the project by the nurses. (A full account of the introductory statements and information package is provided in the appendices A and B.) Further, subject profiles included compliance checks (the extent to which the readings have been completed) and time diaries (a record of the time spent with client); see appendix F.

Role in the Program. For the most part, VON nurses agreeing to participate in the program delivered the intervention and monitored progress of treatment. Nurses' taking part in the program were asked to read a statement of the intervention's broad and specific objectives. This statement is presented in appendix C and outlines the role of the nurses in facilitating participants' understanding of treatment goals and providing concrete

guidance as the program is completed. For example, nurses were instructed on how to help clients set manageable goals, reward small success, and encourage compliance. That is, the VON acted as the resource persons for an essentially self-administered treatment. Also, the VON nurses conducted compliance checks (see appendix F), kept time diaries (largely for administrative purposes, as they were paid for their time by the VON), and answered treatment-related questions for clients taking part in the program. The time spent on these activities was restricted to a maximum of 15 minutes during a home visit.

Training and collaboration. Training of the nurses took place prior to the commencement of the program. All nurses who took part in the program were required to read the content of the bibliotherapy material (i.e., Lewinsohn et al., 1986). VON nurses also received a session-by-session description of the intervention. Further, there were several presentations made throughout the study to share outcome data and ask for feedback regarding program issues, participant progress, and possible improvement to the intervention module.

Design and Data Analysis

The evaluation of the intervention was conducted using a multiple baseline design across individuals (multiple baseline referring to the number of subjects). Baseline data were collected. Once the baseline had stabilized, participants were introduced to a 6-week self administered treatment. Assessment took place immediately after completion of the program and at three months following completion. The treatment model was tested in three series, each including two complete cases. The first series (Series A) was considered an initial test of the general feasibility of the model. The second series (Series B)

contained program modifications based on results from series A. Finally, Series C was, essentially, a replication of Series B.

Establishing baseline. The collection of baseline data began immediately following the completion of diagnostic and screening assessments. During the baseline phase, the HRSD and the GDS were administered weekly. The modified mood item taken from the GDS was answered. The item was used to create a 9-point Likert-type scale used to rate mood on a daily basis, ranging from “extreme sadness” to “feeling great.” Daily administration of the GDS modified mood item allowed a more precise monitoring of subjective mood changes. A baseline was considered stable if mood rating (on the daily mood tracking scale ranging from 1-9) did not fluctuate by more than a single scale point in either direction, within a given week. Treatment was only introduced after the baseline was stabilized. This procedure allowed the repeated assessment of changes in the level of depression which were associated in time with the introduction of treatment. That is, the treatment was introduced at different points in time across subjects (multiple baseline), and treatment effects were expected to occur at the point of introduction and not at any other point during the baseline. Further, staggering the beginning of treatment minimized the possibility that changes in the level of depression had to do with variables other than treatment associated with any given starting time.

The pattern of results was examined in two ways: case profile and visual representation. Case profile included detailed information concerning the participant’s psychiatric history, resources, and living situation. These contextual variables were used to examine the process of change. We also examined changes in probable diagnostic

status associated with treatment, as measured by the SCID, and in multiple aspects of functional capacity, as measured by the SMAF and the OMFAQ.

Visual examination of the data allowed us to evaluate and study the pattern of change in mood indices associated with treatment. The primary variable of interest was change in level of depression, as measured weekly by the GDS and HRSD. There are several criteria employed to assess changes in the graphical form of the data: mean, level, and latency (see Kazdin, 1982; 1998).

Changes in mean. A direct visual comparison of means associated with phase changes (baseline vs. treatment) is possible by graphing the average rate of behaviour associated with each phase as a constant. In this study, baseline average rate was compared to that of the treatment phase. Mean comparisons are gross estimations of the magnitude of changes associated with the interruptions (i.e., treatment) to the baseline phase.

Changes in level. Changes in level refer to an abrupt change associated with the end of one phase and the beginning of another. A change in level is an index of the magnitude of change immediately associated with the interruption of baseline. It should also be noted that changes in level are independent of changes in mean.

Changes in latency. Changes in latency refer to the period between the onset of interruption to baseline and observable changes in behaviour. Latency is an index of the time lag between the commencement of treatment and the appearance of changes in behaviour.

Other criteria considered in visual comparison include the variability of the behaviour of interest in a given phase, persistence of trend and level changes across subjects. In addition, this design also permits across-group comparisons of the mean, level, and latency patterns associated with treatment in each group.

SERIES A

This series was designed to examine the basic features of the bibliotherapy program as proposed. The VON psychiatric nursing team identified three participants suitable to participate in this research. As indicated above, the VON nurses (mental health team) spent about 15 minutes each week with each of the participants in order to provide support and clarify program material. Two persons completed the program, and the third terminated at session three, because she left Canada for the winter. This series began in late November for both cases.

Case 1

Personal Information

Mr. A is an unmarried 62-year-old male who lives alone. He has no children and no contact with close relatives. He was born in Quebec and lived with both parents on the family farm. Mr. A was an only child, who reported having little contact with peers as he was growing up. He mentioned that the same situation continued into his teenage years, as he was excessively shy and would not approach people easily. He remained with his parents during his 20s and early 30s, but moved away in his mid-30s for employment in Ontario. Mr. A held a clerical position in the federal government, which he enjoyed. However, he began to experience difficulties with productivity and was pressured to retire early. He indicated that he does not intend to work again.

Currently, Mr. A reported having very few friends. He reported having been engaged several times, but the relationships never led to marriage.

Psychiatric History

Mr. A described his depression as having started nearly 20 years ago, when he suffered the loss of both parents within the same year. He reported that he experienced protracted grief and eventually immersed himself in his work in order to deal with his sadness. He believed that he suffered from prolonged depressed mood. Mr. A reported that in 1990 he was admitted to the Royal Ottawa Hospital with severe depression. His depressive symptoms continued for over six months. He was continually pressured to retire due to his decreased performance at work and retired three years ago. Further, he believed that his depression has been maintained by early retirement. He reported decreased social contact and difficulty maintaining a reasonable activity level. He mentioned that he was shy and not successful at developing a social life. Mr. A reported no history of depression in his family. He described his childhood as lonely, but reported no history of abuse.

Results: Evaluating Depression

Depression at Pre-treatment

At pre-treatment, Mr. A acknowledged being depressed, but stated that he was not suicidal. His SCID (for the DSM-IV) interview indicated the presence of a Major Depressive Disorder, recurrent; with melancholic features (296.32). The symptoms were coded as moderate. His GDS and HRSD scores were 29 and 18, respectively. These scores also indicated moderate levels of depression. Scores for GDS and HRSD throughout the treatment period are summarized in table 1.

Depression at Post-treatment

At post-treatment, Mr. A's SCID interview indicated a Major Depressive Disorder, recurrent with melancholic features, in partial remission (296.35). In this case, the partial remission specifier was given due to the presence of some symptoms, but not meeting full criteria. His GDS and HRSD scores at post-treatment were 20 and 6, respectively. The HRSD score indicated recovery; however, the GDS remained elevated, pointing to the presence of some residual depressive symptoms.

Depression at Follow-up

At the 3-month follow-up, Mr. A's interview indicated that some residual depressive symptoms remained. He did not meet full criteria for a Major Depressive Disorder (296.35). His HRSD score was 10 and GDS was 26. The HRSD indicated mild depression, but GDS indicated a higher level of severity (see table 1).

Evaluation of Clinical Significance

According to cut-offs and normative data provided by Jacobson and Truax (1991), the mean HRSD score for the clinically symptomatic range is 22.03 (± 7.19). A reliable change index (RCI) of 9 points is necessary for a clinically meaningful improvement ($RCI > 1.96$). Mr. A's average HRSD score for the pre-treatment period was 15.5 (placing him in the clinically symptomatic population). His score at post-treatment was 6, which indicated a decrease of 9.5 point and reflected a clinically meaningful change at the end of treatment. However, at follow-up his HRSD score was 10 which reflects a change 5.5 points from pre-treatment. The difference between pre-treatment and follow-up scores failed to reach clinical significance.

Visual Examination

Changes in mean. Means associated with baseline and treatment phases can be visually compared by plotting the mean of each phase as a constant. Figure 1 illustrates the changes in mean as measured by the HRSD and the GDS. The mean scores for HRSD were 16 and 9.8 for the baseline and treatment periods, respectively. The average scores for the GDS were 28.5 and 26.2 for the baseline and treatment periods, respectively. The HRSD and GDS means showed a drop of 6.2 and 2.3 point, respectively.

Changes in level and latency. Changes in level relate to abrupt changes between the two points associated with the end of one phase and the start of another. There were no immediate changes after the introduction of treatment. Figure 2 illustrates the HRSD and GDS scores over baseline and treatment phases. There appears to be a latency period of about three weeks -- that is, there is a lag between the introduction of treatment and a detectable change in behaviour. This trend is especially noticeable for HRSD scores which showed a nearly linear decline between weeks 6 and 8 (see figure 2).

Subjective mood ratings. Over the treatment course, Mr. A showed a gradual improvement in mood. This was reflected in his subjective mood ratings shown in figure 3. During the first half of the program (first three weeks), Mr. A consistently rated his mood as "often sad." This was followed by fluctuating, yet increasingly positive mood ratings for the remaining three weeks of the intervention. For example, he was more likely to rate himself as "sometimes sad" or "neutral," rather than "extremely sad" or "often sad." This trend in subjective mood ratings was mirrored by scores on the HRSD, which showed a decline at about the same point in time (see figure 2, Table 1).

Table 1
The HRSD and GDS Scores for Mr. A

Baseline Initial Assessment	18	29	"I feel sad all the time and feel I am getting worse. I don't feel like getting out – I just want to sleep. I am drained of energy and cannot wake up in the morning."
Baseline	13	28	"I am not optimistic about the possibility of positive out come. I feel overwhelmed and cannot sleep during the night. I have more bad than good days."
After Session 1 Information about Depression	13	28	"I rarely feel good...sadness is always there. The readings helped to clarify some things, but I am not getting better. My life is empty and without hope."
After Session 2 The thinking-feeling link	11	28	"I like the idea of linking feeling with thinking. I like the idea of contracting with yourself. I am starting to break large tasks into small ones. I use a timer."
After Session 3 Introducing pleasant activities.	9	29	"I really like the idea of adding pleasant activities. I think it would be a good idea to keep doing that for longer than 30 days. However, I still feel hopeless about establishing social contacts...I am very lonely."
After Session 4 Plan & increase pleasant activities	10	29	"I still feel discouraged, but I am enjoying my walks. I contacted Good Companions {a community resource centre for older adults}. I am joining their Christmas band, but I am worried about making errors. I am not happy...I need friends and a partner."
After Session 5 Dealing with negative thinking	10	23	I found the session about how to deal with negative thoughts useful. It might help me deal with my constant worry and self-criticism. I am using the blow-up and worry-time technique. I think having friends is the key. It is possible I am getting better. . I made some telephone calls in order to get together with some people, but I was very worried about getting disappointed. I got together with some people on Saturday for Pizza and I enjoyed it"
After Session 6 Post Assessment How to maintain gains & reusing what you learned	6	20	"I guess I am feeling a bit better. I got involved with the drama group {at good companions} and I am enjoying exercising. I still feel tired often, but I don't feel like I am suffering in the same way – you know, as if I wanted to die. My motivation to plan activities has gone up. I am not in deep depression but I am anxious about the future..."
Three-month Follow-up	10	26	"I go to the community centre 3 times a week. I have not met anyone and I have lost hope that I ever will...I am not as depressed as I used to be , some times it is worse than others."

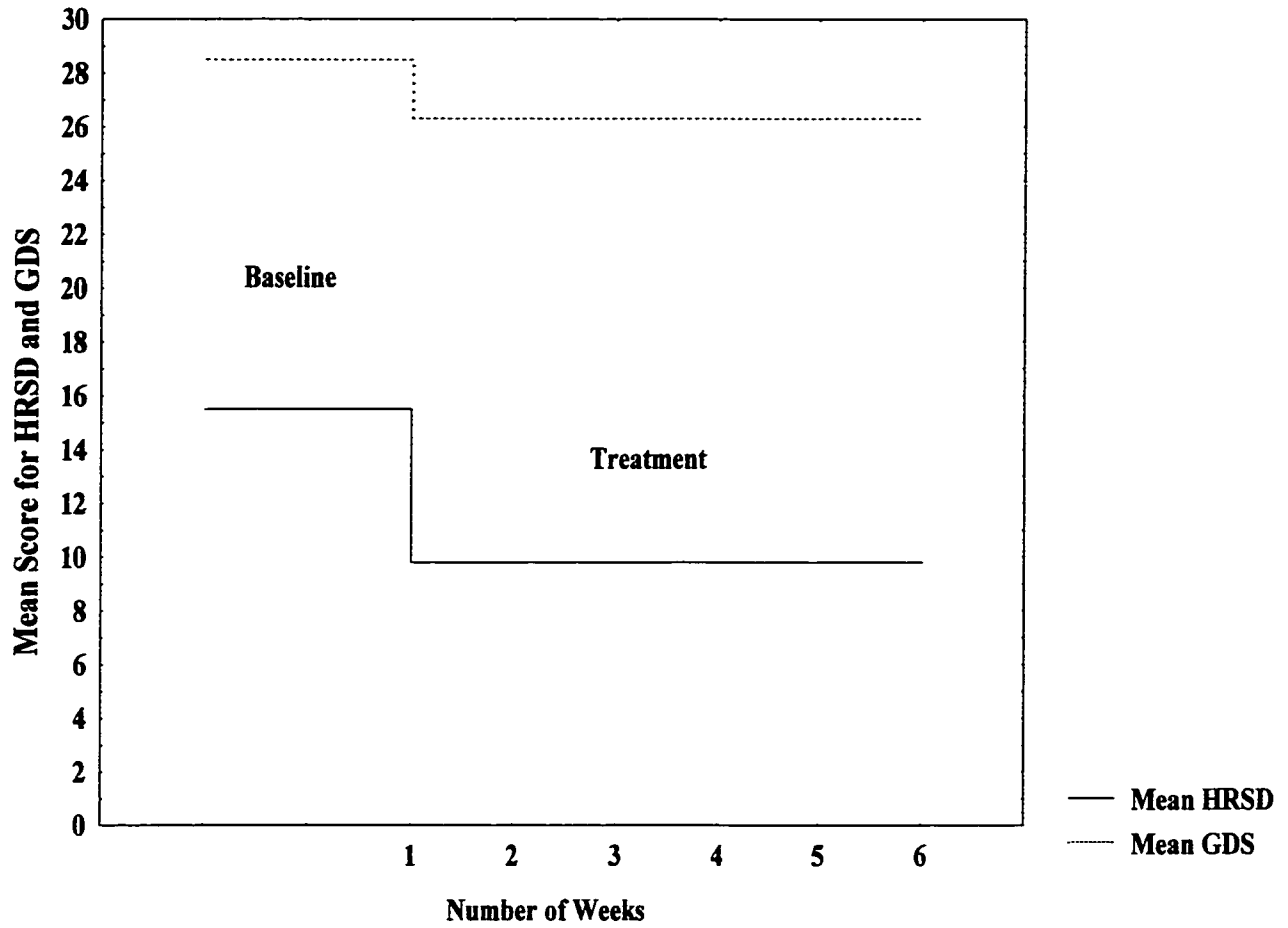


Figure 1. Changes in the mean scores of the HRSD and GDS over the baseline and treatment periods for Mr. A.

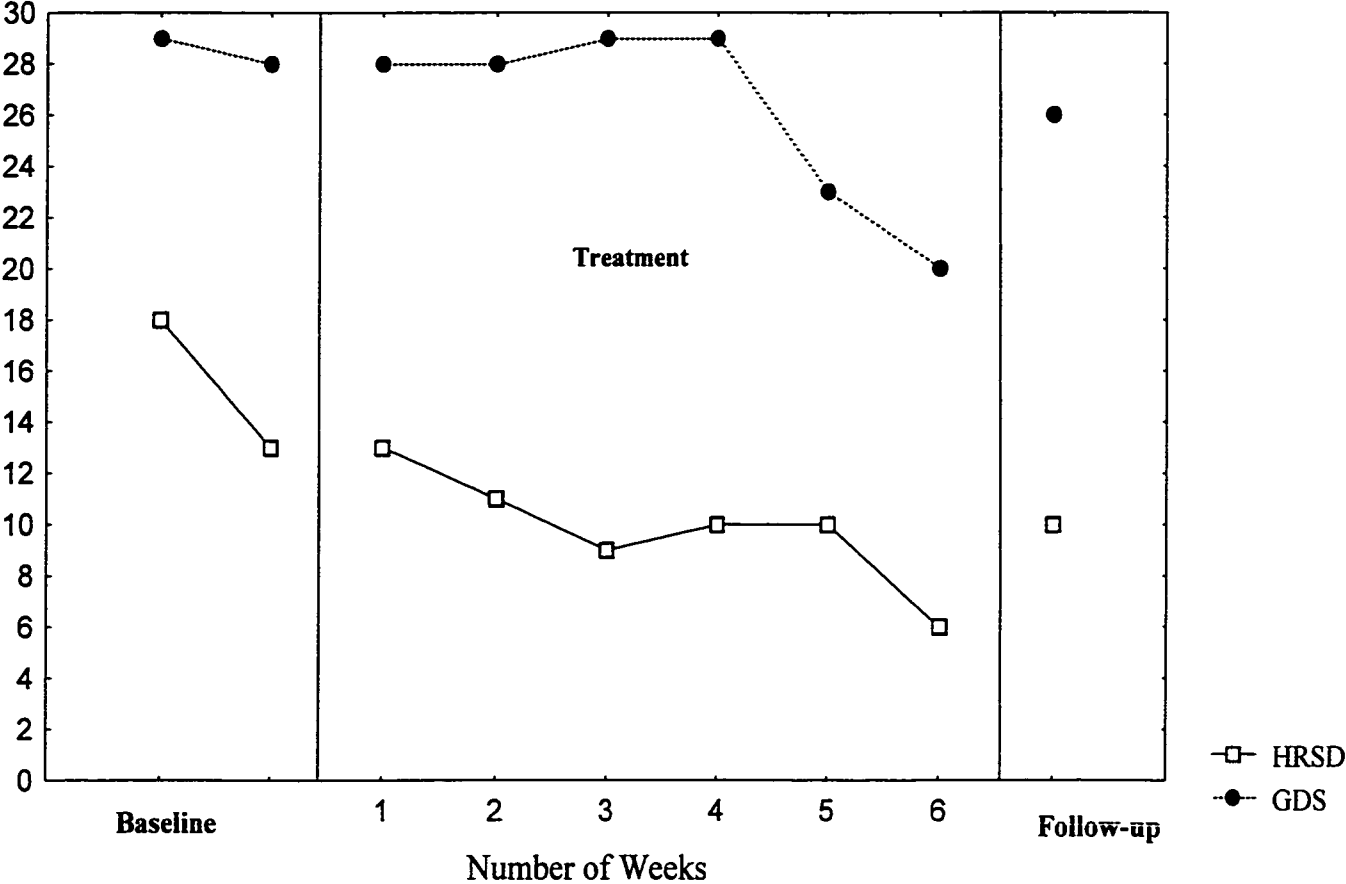


Figure 2. Scores for the HRSD and GDS as a function of baseline and treatment periods, and at 3-month follow-up.

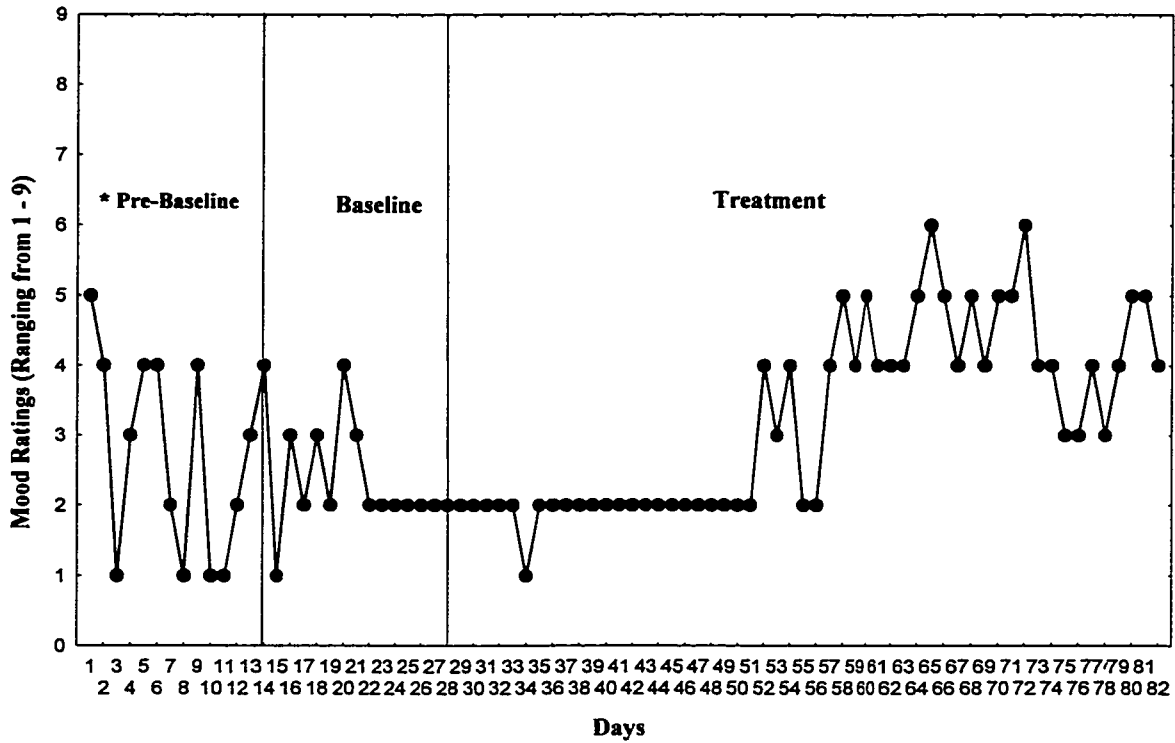


Figure 3. Daily mood ratings as a function of baseline and treatment periods. Extreme Sadness =1; Always Sad =2; Often Sad =3; Some Sadness =4; Neutral =5; Fair =6; Good =7; Very Good =8; Great Mood =9; with higher scores indicating better mood.

* Data presented at pre-baseline were collected by the VON before the commencement of the baseline period.

Results: Evaluating Functional Capacity

The following multiple aspects of functional capacity were assessed at pre- and post-treatment, and at a 3-month follow-up: health status, mobility, activities of daily living and instrumental activities of daily living, mental functioning, and communication. The findings are presented sequentially by category of functional capacity at the three assessment points for ease of comparison. Qualitative data from the OARS and SMAF are incorporated under appropriate headings. A summary of pre- and post-treatment and follow-up SMAF scores are shown in table 2.

Health Status

Pre-treatment. Mr. A's OARS pre-treatment assessment indicated that he had seen his doctor at least 12 times in the past 6 months. During the past 6 months he also reported being sick on 5 separate occasions, each lasting for about a week. Mr. A has been diagnosed with severe asthma, constant sinus irritation, and poor circulation. He also mentioned being treated for a prostate disorder. Mr. A reported that, on occasion, he experienced severe back pain, with unknown etiology (what he refers to as "phantom pain"). He mentioned that, about 36 years ago, he was hit by a car which caused serious injuries. As a result of that accident, he temporarily lost feeling in his left leg and his vision. He recovered after about four weeks. Further, although not medically confirmed, Mr. A believes that he may have suffered from a minor stroke. He rated his health as poor and reported that it has become much worse over the past 5 years. He was rated as mildly physically impaired on the OARS summary scale.

Post-treatment. Mr. A's health status was largely unchanged at post-treatment. He reported no change in any of the health difficulties cited at his pre-treatment interview. He rated his health as poor, and much worse over the past five years. He also mentioned that his

back pain and asthma interfered with his activities. He was rated as mildly physically impaired on the OARS summary scale.

Follow-up. Mr. A's report regarding his health at follow-up remained consistent with his pre-and post-treatment reports. He reported that his urinary tract condition had deteriorated and felt that these new developments, in addition to asthma and arthritis, had curtailed his activity level. He recently attempted, however, to overcome these conditions by employing a "grabber" -- equipment that helps him reach up and down for household items. He rated his health as poor and worsening over the past five years. On the OARS summary scale, he was rated as mildly physically impaired.

Mobility

Pre-treatment. Mr. A's mobility at pre-treatment appeared intact; however he reported having some difficulty during the winter months. He reported using a cane when outdoors and moving slowly. He described being able to negotiate stairs, if it could not be avoided. Mr. A reported occasionally using leg braces.

Post-treatment. According to the SMAF assessment at post-treatment, although Mr. A found walking difficult, he was able to manage both indoors and outdoors. He reported that walking outdoors was much easier during the spring and summer. There was, however, very little change in mobility between pre- and post-treatment functioning. He reported finding stairs difficult, but was often able to avoid them.

Table 2
Scores for the SMAF Assessment at Pre- and Post-Treatment,
and at the 3-Month Follow-up

Mobility	-5/-18	-1/-18	-5/-18
ADLs	0/-21	-1/-21	-1/-21
Instrumental ADLs	-2/-21	0/-21	0/-21
Mental Functioning	-1/-15	0/-15	0/-15
Communication	0/-9	0/-9	0/-9

Total scores on each category of functioning are determined by the level of disability. Items in the respective category have 4 classifications of disability: complete autonomy (0); requires supervision (-1); requires help (-2), and total dependence (-3). Higher total scores indicate a higher level of disability in each category and 0 indicates high functioning.

Follow-up. Mr. A's mobility remained unchanged over the three points of assessment (see table 2). At follow-up, he reported that his outdoor mobility was much easier and that he went for walks three times a week as a way of exercising.

Activities of Daily Living and Instrumental Activities of Daily Living

Pre-treatment. Mr. A's SMAF and OARS assessment at pre-treatment indicated that he was able to carry out most of activities of daily living independently. He reported being able to perform all personal care without difficulty (e.g., washing, dressing, toileting, and meal preparation). However, on observation, his appearance was somewhat compromised, with possible deterioration in self-care. Mr. A received home-care service twice a week to help him complete his household chores, such as laundry and groceries.

Post-treatment. Mr. A's SMAF and OARS post-treatment assessment indicated no major changes with respect to his ability to complete his instrumental activities of daily living, compared to his pre-treatment scores. He did, however, report shopping on his own more often and carrying out more of his own housekeeping. This was largely a consequence of a formal reassessment by his social case worker, which indicated that his ability to perform activities of daily living had improved.

Follow-up. In general, there was no major change in Mr. A's ability to carry out activities of daily living over the three assessment points. However, he reported that his urinary tract condition was worsening.

Mental Functioning and Communication

Pre-treatment. Mr. A's score on the 3MS at pre-treatment was 89/100 (and a derived score of 30/30 on the MMSE). His memory, orientation, and comprehension appeared normal. However he demonstrated weakness in his ability to abstract. He appeared to have a

minor speech impediment, which he described as present since childhood. This did not affect Mr. A's ability to communicate and express himself. Mr. A's SMAF assessment indicated minor behavioural problems, such as stubbornness and an expressed constant dissatisfaction with others, which affect social functioning. He had his own power of attorney and was making sound decisions with respect to finances.

Post-treatment. Mr. A's mental functioning and communication abilities (as measured by the SMAF, table 2) were unaltered at post-treatment. However, he reported that since his mood improved, he felt his ability to get along with others had improved.

Follow-up. Mr. A's mental functioning and communication appeared intact at follow-up and showed no apparent change from the two previous assessments.

Summary and Discussion for Case 1

Mr. A's post-treatment assessment indicated partial remission of his depression, which is corroborated by other instruments and self-report (see figure 3). Also, symptom severity was reduced, as Mr. A scored in the non-depressed to mild range on all instruments.

Changes occurring during the treatment itself were also demonstrated. Mr. A's depression level showed a decreasing trend and he showed an average improvement in mood over the treatment period (see figure 1 and figure 2). However, it is important to note that none of these changes coincided with the introduction of treatment, but rather occurred after a delay of two weeks.

Upon close examination, it appears that the most important decrease occurred after the introduction of the session concentrating on the role of pleasant activities in maintaining positive mood (see table 1 for detailed self report). Mr. A was particularly responsive to suggestions for increasing the number and the quality of pleasant activities during the week.

He made special effort to initiate social contacts by involving himself in a community centre for seniors. At post treatment, Mr. A reported having “more good days than bad days” and that “it helps to be busy.” He also reported “enjoying his activities at the centre.” In addition, he reported that he continued to use the exercises from the intervention sessions, particularly tracking the number of pleasant activities in which he engaged.

In Mr. A’s case, the co-occurrence of mood improvement and increase in pleasant activities is noteworthy. It is possible that a general decrease in his quality of life was mediated by retirement and a gradual decrement in pleasant activities over the past few years. This may have maintained and exacerbated his depressed affect. This vicious cycle of increasing isolation and depressed mood may have been interrupted by introducing positive reinforcement to his daily life. However, at follow-up, Mr. A had some residual symptoms of depression. He reported at the follow-up interview that his inability to meet a partner causes much of his sadness.

Mr. A’s functional capacity remained rather stable over pre- post- and follow-up assessments. There were only minor changes in his ability to perform instrumental activities of daily living, as he reported taking more initiative with the upkeep of his apartment. However, Mr. A reported to the VON nurse (see table 1) that that his social activities had increased, his social life had improved, and he was better able to get along with others.

Case 2Personal Information

Ms. E is an 84-year-old widow who lives alone. She lost her husband a year ago, after 64 years of marriage. She has two adult children. Her son lives in Ottawa and is in frequent contact with her. Her daughter lives in Edmonton and visits about three times a year. Ms. E was born in Ontario. Her parents owned a dairy farm, and she lived with them until she married, at age 19. She described living in a close family environment, where everyone had to work hard to maintain the family business. Ms. E mentioned that, when married, she continued to work hard to make ends meet with small earnings. She spent some of her adult life in New York, but moved back to Ottawa with her husband in the late 1930s. She described this move as difficult and mentioned having lost many supportive friends.

Psychiatric History

Ms. E described her first depression as a reaction to being over-extended with work, child care, and financial pressures during the economic depression years. She mentioned having experienced several periods of severe depression characterized by loss of appetite, insomnia, and anxiety. She reported a hospitalization with shock treatment in 1939, when she was in her early 20s. The episode seemed to coincide with her move to Ontario and lasted for six months. The second episode of depression occurred in reaction to her mother's death, nearly 28 years ago. At that time, she was also hospitalized for three weeks and again received shock treatment. She reported feeling better after ECT and remained well until her husband passed away last spring.

Results: Evaluating Depression

Depression at Pre-treatment

At pre-treatment, Ms. E acknowledged being depressed, but denied any thoughts of suicide. According to the SCID interview, her condition met the diagnosis of Major Depressive Disorder, recurrent, mild (296.31). Her symptoms could not be accounted for by bereavement, as the symptoms had persisted for longer than two months after the loss. Her HRSD score at assessment was 15 and GDS 17, also placing her in the mild range. Scores for HRSD and GDS throughout the treatment period are presented in table 3.

Depression at Post-treatment.

At post-treatment, Ms. E reported that she remained sad, but denied any thoughts of suicide. Her SCID interview indicated Major Depressive Disorder, recurrent, mild (296.35), in partial remission. Ms. E reported adequate energy levels and no longer reported guilt and self-reproach. Her feelings of emptiness and some loss of interest in social contact, however, remained. Her HRSD score at post-treatment was 7, and her GDS score was 15. Although showing some decrease in symptoms when compared to pre-treatment scores (i.e., a decrease of 8 points on the HRSD and 2 points on the GDS), these scores still indicated mild levels of depression.

Depression at Follow-up

At follow-up, Ms. E reported experiencing sadness, but denied any thoughts of suicide. Her SCID interview indicated Major Depressive Disorder, recurrent, mild, in partial remission. The partial remission specifier is indicated because of the presence of residual symptoms. Her HRSD and GDS were 8 and 16, respectively. Although these scores indicated

no change in her affective status since post-treatment, gains made since pre-treatment had been retained at the 3-month follow-up.

Table 3
The HRSD and GDS Scores for Ms. E

	HRSD	GDS	Comments
Initial Assessment Baseline	15	17	"I feel great emptiness in my life. I ruminate about my husband's passing and wonder if there was more we could have done. I feel this is the hardest time of my life. I don't want to fall into deep depression, but there is a huge gap in my life."
Baseline	14	17	"I feel the same. It is hard on a person to be always alone. My son visits but he has his own life. I don't feel like there a reason to get up in the morning but I try to keep busy."
After Session 1 Information about Depression	10	15	"The reading is O.K. I do it at night...I think I did it. I have a hard time remembering.... I am worried about home-care services being cut. It is difficult, you know.... I miss my husband."
After Session 2 The thinking-feeling link	8	16	"I miss my husband around the holidays. I feel down, but am trying to get along"
After Session 3 Introducing pleasant activities	5	11	"I am not sure I remember the reading...I don't do much, I don't see people socially much. I cannot start anything until I take care of my health problems {teeth and eyes}. I would not feel comfortable.... I have not had a chance to go to the community centre."
After Session 4 Plan & increase pleasant activities	6	16	"I am busy with doctors...my eyes need to be taking care of. I can't really get to the community centre. I go out while shopping and for walks"
After Session 5 Dealing with negative thinking	8	15	"...worried about my health. I try not to think negatively, but it is hard when you are always alone. I am not getting worse, but I have been feeling sad in the last few weeks."
After Session 6 Post Assessment How to maintain gains & reusing what you learned	7	15	"I feel the visits help, but I am mostly sad. Hard to stop thinking about husband. I will try to read things over, I think it helps to keep learning...it keeps me busy.... I am not ready to go to the community centre and don't like to visit much."
Three-month Follow-up	8	16	"I still feel sad, but trying to get along. The sadness will never go away and I will never have my husband back. I wonder if we did everything we could for him. I do what I have to, but the sadness is there."

Evaluation of Clinical Significance

According to cut-offs and normative data provided by Jacobson and Truax (1991), the mean HRSD score for the mildly symptomatic range is 6.25 (\pm 4.24). The reliable change index (RCI) necessary for a clinically meaningful improvement in this range is 5 points (RCI > 1.96). Ms. E's average HRSD score for the pre-treatment period was 14.5, placing her in the mildly symptomatic population. Her score at post-treatment was 7, indicating a decrease of 7.5 points, which reflects a clinically meaningful change at the end of treatment. Similarly, at follow-up her HRSD score was 8, a change of 6.5 points from pre-treatment. The difference between follow-up and pre-treatment remained clinically significant.

Visual Examination

Changes in mean. A direct visual comparison of means associated with baseline and treatment phases is provided by plotting the mean of each phase as a constant. Figure 4 illustrates the changes in mean as measured by the HRSD and GDS. The average scores for the HRSD were 14.5 and 7.3 for the baseline and treatment periods, respectively. This shows a drop of 7.2 points. Similarly, the mean scores for the GDS were 17 and 14.6, for the baseline and treatment periods, respectively, reflecting a drop of 2.4 points.

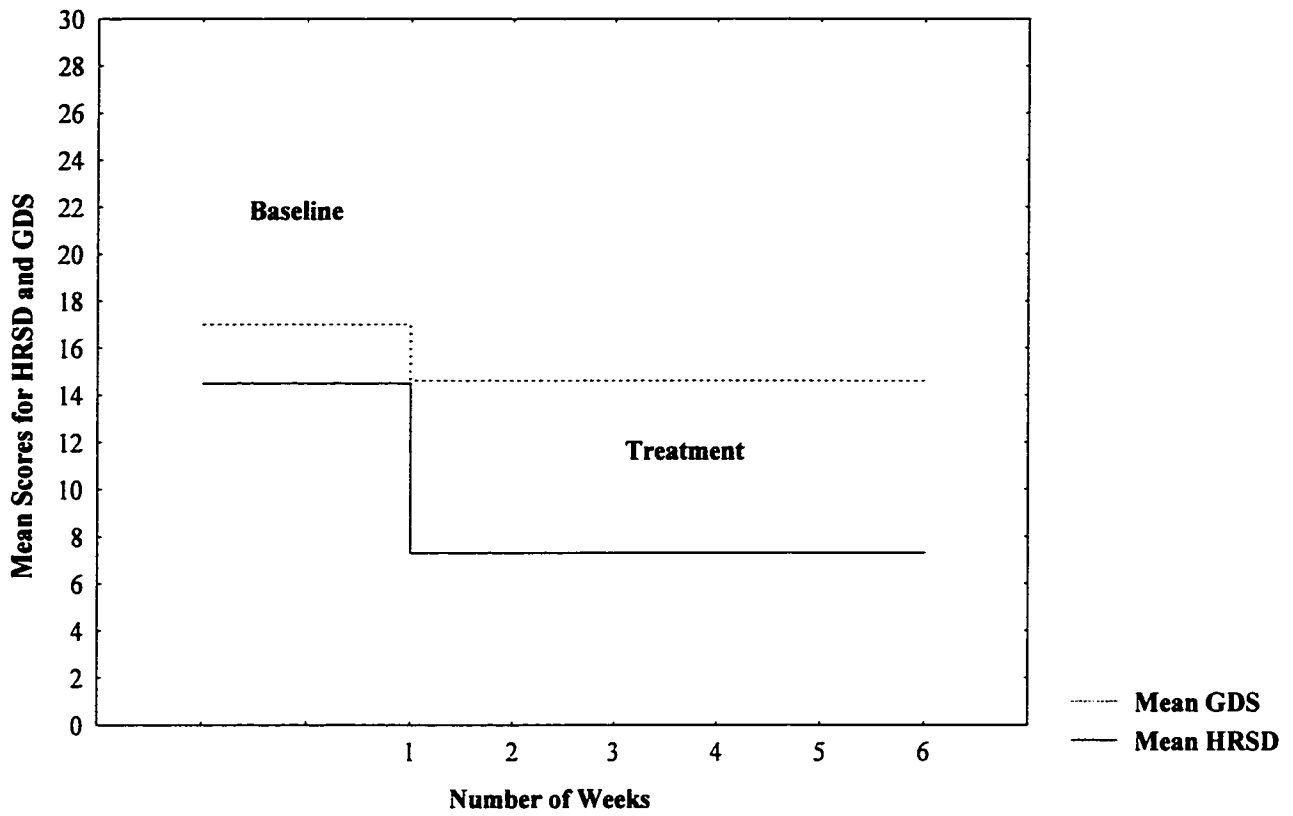


Figure 4. Changes in mean scores of HRSD and GDS over the baseline and treatment periods for Ms. E.

Changes in level and latency. Changes in level are the abrupt changes between the two points associated with the end of one phase and the commencement of another. In the case of Ms. E, the HRSD score showed a decrease of 4 points and the GDS showed a decrease of 2 points. Figure 5 shows the HRSD and GDS scores over the baseline and treatment periods. There appears to be a decline in depressive symptoms indicated by these two measures over the treatment period, with improvements in mood most apparent at week 3, followed by a slight increase in symptoms

Subjective mood ratings. Ms. E's subjective mood showed little improvement over time (see figure 6). This pattern began to change slightly toward the end of the intervention, when she began to rate her mood as characterized by "some sadness" rather than "often sad."

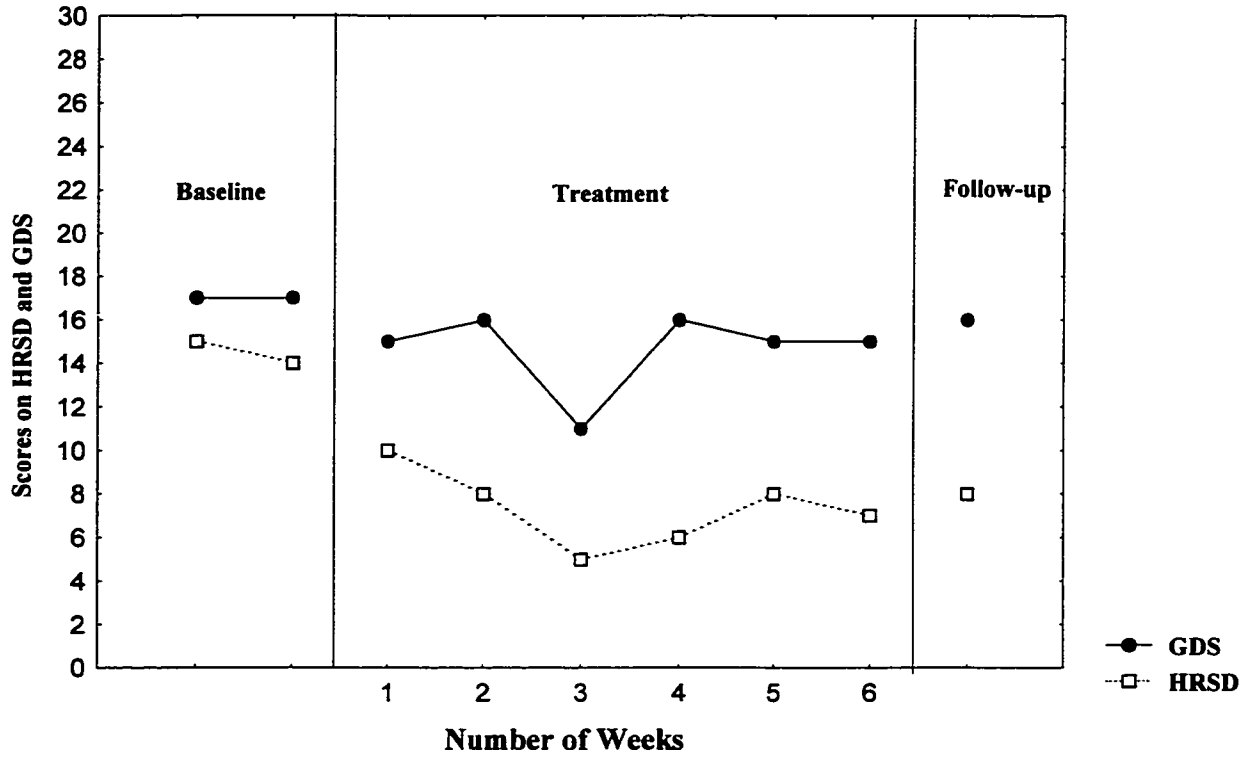


Figure 5. Scores for the HRSD and GDS as a function of the baseline and treatment periods, and at 3-month follow-up.

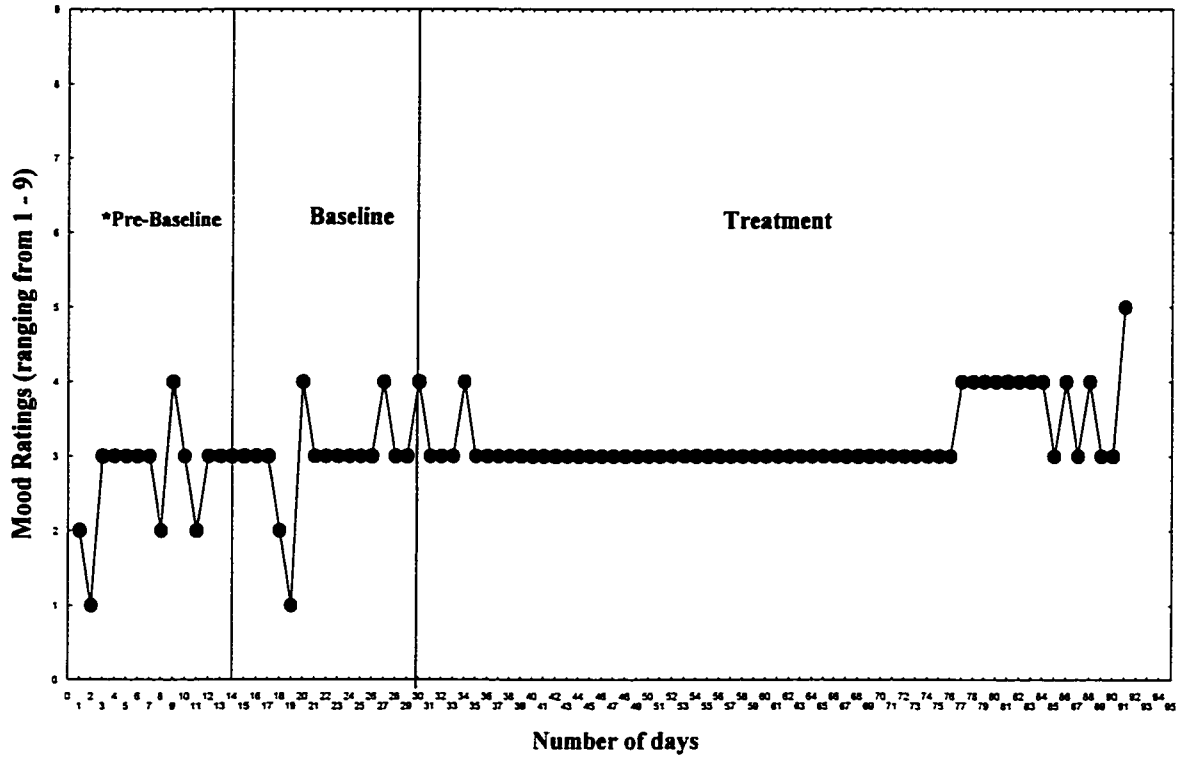


Figure 6. Daily mood ratings as a function of baseline and treatment periods. Extreme Sadness =1; Always Sad =2; Often Sad =3; Some Sadness =4; Neutral =5; Fair =6; Good =7; Very Good =8; Great Mood =9. Higher scores indicate better mood.

* Data presented at pre-baseline were collected by the VON before the commencement of the baseline period.

Results: Evaluating Functional Capacity

The following multiple aspects of functional capacity were assessed at pre- and post-treatment, and at the 3-month follow up: health status, mobility, activities of daily living and instrumental activities of daily living, mental functioning, and communication. The findings are presented sequentially by category of functional capacity at the three assessment points for ease of comparison. Qualitative data from the OARS and SMAF are incorporated under appropriate headings. A summary of pre- and post-treatment and follow-up SMAF scores are shown in table 4.

Health Status

Pre-treatment. As assessed by the OARS at pre-treatment, Ms. E reported 6 visits to her doctor in the last 6 months. However, during the same period, she did not report extended times of incapacity or illness. Ms. E was diagnosed with extremely high blood pressure, but reported that this problem was being monitored by the VON and was under control. She described the general condition of her health as fair and relatively stable over the past five years. According to the OARS subscale, she suffered from mild physical impairment.

Post-treatment. Ms. E's health status at post-treatment was largely unchanged from pre-treatment assessment. Her blood pressure remained under VON monitoring. As at pre-treatment, her OARS assessment indicated that she perceived that her health to be in a fair condition and as stable over the past five years. Her OARS assessment indicated only minor physical impairment.

Follow-up. At follow-up, Ms. E's blood pressure was considered stable and she was released from VON care. When compared to pre- and post-treatment, there were no noted changes indicated on her OARS follow-up assessment.

Mobility

Pre-treatment. Ms. E was fully ambulatory at pre-treatment, but reported slight difficulty with arthritis and poor circulation. She indicated that this interfered with her ability to walk outdoors. She described using special transit to travel to far destinations, but was also able to use unadapted vehicles and regular city transit.

Post-treatment. Ms. E's mobility at post-treatment remained adequate. She did, however, report experiencing more difficulty walking outdoors during the winter months.

Follow-up. At the follow-up assessment, Ms. E reported that her mobility remained adequate. There were no changes on the SMAF from previous administrations.

Table 4
Scores for the SMAF Assessment at Pre- and Post-Treatment,
and at the 3-Month Follow-up

Mobility	0/-18	-.5/-18	0/-18
ADLs	0/-21	0/-21	0/-21
Instrumental ADLs	-4/-21	-2/-21	-4/-21
Mental Functioning	-2/-15	-2/-15	-2/-15
Communication	-1/-9	-1/-9	-1/-9

Total scores on each category of functioning are determined by the level of disability. Items in the respective category have 4 classifications of disability: complete autonomy (0); requires supervision (-1); requires help (-2), and total dependence (-3). Higher total scores indicate a higher level of disability in each category and 0 indicates high functioning.

Activities of Daily Living and Instrumental Activities of Daily Living

Pre-treatment. At pre-treatment, Ms. E reported being able to carry out most activities of daily living independently, as indicated by the SMAF assessment. She performed all personal care without difficulty and her appearance was intact. She received four hours of home support each week to complete household chores, especially laundry and shopping. She received help organizing her medication regimen from the VON nurse.

Post-treatment. According to the SMAF post-treatment assessment, Ms. E's ability to perform activities of daily living remained intact and unchanged from her pre-treatment assessment. Her home-care case worker had reduced her home-care help from four to two hours per week. Her ability to perform household chores was assessed as improved by her case worker. Ms. E reported doing most of her own shopping and also frequently doing laundry without help. Improvements in her ability to carry out instrumental activities of daily living are reflected in table 4.

Follow-up. According to the SMAF assessment, Ms. E's ability to carry out activities of daily living and personal care at follow-up were intact and unchanged from previous assessments. However, she reported feeling unable to do her own shopping and stated that her son frequently helped her.

Mental Functioning and Communications

Pre-treatment. Her 3MS score at pre-treatment was 83/100 (her derived MMSE score was 29/30). These scores meet criteria for adequate cognitive functioning for this study. However, Ms. E's scores on First and Second Recall, as well as on Similarities, indicated memory problems and a tendency towards concrete thinking. She had slight difficulty

hearing, but did not require a hearing aid. She also reported being assessed for cataracts, but was able to read the newspaper and watch television without serious difficulty.

Post-treatment. Ms. E's SMAF post-treatment assessment indicated no change from pre-treatment scores. She demonstrated some impairments related to memory. On observation during our weekly interviews, her memory for recent events appeared compromised on several occasions (e.g., she repeatedly forgot information, instructions, and appointment dates). Although she had read the session material, she showed poor recollection of the content and had not completed all the exercises. Further, Ms. E tended to repeat stories from previous interviews and frequently even repeated herself in the course of a single visit.

Follow-up. Ms. E's SMAF follow-up assessment indicated no change from previous evaluations.

Summary and Discussion for Case 2

Ms. E's diagnostic assessment showed some decrease or partial remission of depressive symptoms, which was considered clinically significant at the end of treatment, with most of the substantial change occurring near the end of treatment. That is, Ms. E consistently rated her mood as "often sad," with slight improvements appearing near the last two weeks of the intervention. This mood improvement also appeared on structured instruments.

In general, Ms. E was interested in completing the program, but had difficulty maintaining consistency and continuity in handling the treatment material. For example, she would often forget to use the exercises more than once and had difficulty recalling the

content of the written material. Some cognitive decline and/or lack of motivation may have interfered with her efforts.

The issue may not be one of verbal compliance or actually reading the material, but rather one of behavioural implementation. Though willing to read the material, Ms. E was very reluctant to make modifications to her daily routine. Ms. E enjoyed the visits from the VON and spoke positively of being able to discuss the intervention with the VON. However, she continued to postpone the pleasant activity exercises and never acted on her intentions of approaching the local community centre, visiting more often with neighbours and friends, and taking a trip to see her daughter. She was, in essence, confined to her home for the duration of the intervention. The absence of true implementation (i.e., behavioural change), may well explain Ms. E's lack of a definitive response to treatment.

Also, Ms. E's functional capacity did not show very much variation over the three points of assessment. Her ability to perform instrumental activities of daily living was slightly improved at post-treatment, although the gains were lost at follow-up assessment.

Case 3

This participant terminated the treatment prematurely. However, the findings provided information which was used to modify the treatment in the subsequent phase. Although this case was not part of the formal series, the qualitative data were considered informative and are reported here.

Personal Information

Ms. R is a 74-year-old married woman. She has four adult children, one of whom currently resides with her. Ms. R described a difficult life, with an extremely abusive first marriage that lasted for 17 years. She ended the relationship, and as a result was ostracized by her family who did not approve of divorce. She took various jobs to support three children and was, consequently, absent from them for long hours. Ms. R reported that as a result of this absence she has been estranged from the children of her first marriage for many years. She remarried 10 years after her divorce and had a fourth child, a daughter. She described her second marriage as happy. However, it ended with the sudden death of her husband. Following this difficult time, Ms. R began a career as a school teacher, and later took a job in Israel as an English translator for the Israeli government. She met her current husband in Israel and moved back to Canada. They operated a small business, organizing outings and other mobility services for seniors. This ended about five years ago because of financial complications.

Psychiatric History

Ms. R described very serious bouts of depression occurring during her first marriage, which she attributed to spousal abuse. Further, she described a period of six months after her divorce during which she experienced severe symptoms of depression, characterized by

staying in bed for days and refusing to eat or speak. She mentioned that her depression ended when she made the decision to deal directly with the isolation from her family, especially her mother who would not see her after the divorce. After this, she was free from depression for nearly 40 years.

Results: Evaluating Depression

Depression at Pre-treatment

At pre-treatment, Ms. R acknowledged being depressed, but denied any current thoughts of suicide. According to the SCID interview, Ms. R's symptoms fit the diagnosis of Major Depressive Disorder, recurrent, moderate (296.32).

Results: Evaluating Functional Capacity

Health status. Ms. R's health, as assessed by the OARS indicated that in the last six months she had visited her doctor at least 10 times and, for a total period of two months, had felt unable to carry on usual activities. Ms. R was diagnosed with severe arthritis, asthma, heart condition, and diabetes. She was also diagnosed with breast cancer and underwent a mastectomy and 25 radiation treatments. Her eyesight was adequate with vision correction; however, she had difficulty hearing, and, notwithstanding her hearing aid, had to be spoken to loudly. She described these health conditions as having worsened over the last five years.

Mobility. Ms. R required help to get in and out of bed. She was able to walk independently indoors, but needed assistance if she was negotiating stairs or was experiencing pain. She also required assistance to walk outdoors. She sometimes used a cane, but found it embarrassing to use her walker. She was often driven places by her husband and needed help getting in and out of the vehicle.

Activities of daily living. Ms. R required assistance with most of her daily activities. She had normal urinary and bowel functioning, but received help from her daughter and her husband in dressing and grooming. She also required help with her bath, which she received from the VON nurse and occasionally from her daughter. Ms. R reported that she was not able to do house work or prepare meals and that these tasks were completed by her husband and daughter. Ms. R managed her medication independently.

Mental functioning. According to the 3MS and SMAF, Ms. R's memory, orientation, comprehension, and abstract reasoning appeared normal (98/100 on the 3MS, and a derived score of 30/30 on the MMSE). Ms. R read the newspaper and watched the news on regular basis. Her social behaviour appeared appropriate. She maintained her own power of attorney and could make decisions with respect to budget and property.

Summary and Discussion for Case 3

It was not possible to obtain complete data for Ms. R, as she decided to terminate her participation in the study. Perhaps the most powerful aspect of these data is Ms. R's stated reasons for leaving the study. She informed the researcher and the VON nurse that she was leaving for Florida for the winter. During the final interview, Ms. R reported that after having read the session focusing on reinstating pleasant activities, she came to understand the relationship between her low mood and her inactivity. Although, in the past, Ms. R had had the financial resources to join some of her close friends in Florida, she had refused to go many times over the past two years. According to Ms. R, her refusals were based on her worries about her health and reduced mobility. After reading the session on reinstating pleasant activities, she reported feeling ready and motivated to make some changes to her activity level. Accordingly, Ms. R made special arrangements to compensate for her physical

disabilities when travelling and during her stay away from Canada. These included an accessible residence, an adapted vehicle, and occasional access to a wheelchair.

General Discussion for Series A

Several issues and questions arise from reviewing this series of cases. The first, and perhaps most important, set of issues concerns the implementation of pleasant activities. In the first case, there were strong indications that Mr. A's recovery began around the time when pleasant activities were introduced – that is, three weeks into the intervention period. This is corroborated by his reports regarding his mood, as he cited his new social involvement and activities as a source of pleasure. In contrast, Ms. E did not seem motivated to implement new activities into her daily routine. This can be considered an implementation weakness and may have been responsible for her delayed response to treatment.

In both cases, recovery showed a delay of about three weeks. There are two possible explanations for this delay. On the one hand, the introduction of pleasant activities might constitute a powerful active ingredient in this treatment. This key session was not introduced until the third week of treatment. The alleviation of mood symptoms may have been dependent on the reinstatement of pleasant activities. On the other hand, however, it is possible that a latency period may exist, regardless of what aspect of treatment is introduced. That is, where complex life changes need to be implemented, it may be reasonable to expect a gradual change in behaviour and subsequent change in mood. In order to clarify this issue and test these competing explanations, modifications were introduced to the program and were tested in a second study -- series B.

SERIES B

The pattern of results in Series A raised the question of the importance of pleasant activities to the alleviation of mood symptoms. The 3-week delay in response to the treatment coincided with the introduction of the session designed to reinstate pleasant activities. In order to determine whether the 3-week lag was in fact linked to the implementation of pleasant activities, rather than simply a gradual change resulting from the program in general, we modified the sequence of the sessions. The pleasant activity material was switched from session three to session one. If, indeed, it is the introduction of pleasant activities that has the most significant impact on mood, then we would expect some decrease in this 3-week latency period. In addition, we collected data on the pleasant activities engaged in by the participants. Participants were asked to produce a list of possible pleasant activities, indicated their frequency of occurrence during each week, and rated each activity for enjoyability (neutral, moderately enjoyable, or very enjoyable). The frequency of pleasant activities – that is, activities rated as “moderately enjoyable” or “very enjoyable” -- was tracked by participants on a daily basis. These data were later used to study the link between mood and the number of pleasant activities.

The second issue arising from reviewing the data from Series A pertains to the measurement of functional capacity. The current measures appear adequate for obtaining a stable index of disability (i.e., SMAF and OARS health subscale) but seem less suitable for detecting change over time. Both the SMAF and the OARS showed very little variation during the intervention for participants in Series A. For this reason, and in order to prevent the loss of significant information, additional instruments -- namely, OARS-

social resources and ADL subscales -- were added to assess changes in functional capacity before and after the intervention. Any impact of the intervention would be more likely to appear on these more sensitive indices. This series began in late September for both participants.

Case 4

Personal Information

Mr. Y is a 70-year-old married man. He was born in St. John's, Newfoundland. His father passed away when he was 4 years old. When his mother remarried, Mr. Y was left with his grandmother permanently. He was raised in a fishing community and was pressured to leave school early and work. Mr. Y began fishing at the age of 13, but he later enlisted in the navy. He described his career as long and rewarding and is now a retired veteran. Mr. Y recently moved to Ottawa from St. John's (Jan, 1997) to be near his oldest son. He has 2 other children living away, with whom he has regular contact. At assessment, Mr. Y reported that he does not have any friends in the city.

Psychiatric History

Mr. Y described himself as an anxious person. He reported that he experienced anxiety about his duties and about the future of his family nearly all his life. He also described himself as a workaholic. He reported that his first episode of depression began in late 1996 (nearly 2 years ago) when he was diagnosed with cancer. He also mentioned that his retirement had made him feel unproductive and useless, contributing to his negative mood. Mr. Y attempted suicide in January, 1997. He was treated for an overdose

of sleeping pills and assessed for depression. Currently, he has no thoughts of suicide.

Mr. Y did not remember other times when he experienced this level of mood symptoms.

Results: Evaluating Depression

Depression at Pre-treatment

At pre-treatment, Mr. Y acknowledged being depressed, but denied any renewed interest in suicide. According to the SCID interview, Mr. Y's condition met the criteria for the diagnosis of Major Depressive Disorder, single episode (296.22). His symptoms were coded as severe. At assessment, his HRSD and GDS scores were 33 and 22, respectively. These scores also indicate a severe level of depression. Scores for the GDS and HRSD throughout the course of treatment are presented in table 5.

Depression at Post-treatment

At post-treatment, Mr. Y's SCID interview indicated Major Depressive Disorder, single episode, in partial remission (296.25). Although at the time of the post-treatment interview Mr. Y had been free of symptoms for several weeks, the DSM-IV requires a symptom-free period of 2 months for a diagnosis of full remission. His HRSD and GDS scores at post-treatment were 6 and 12, respectively. These scores, particularly the GDS, indicated the possible presence of mild residual symptoms.

Depression at Follow-up

At follow-up, Mr. Y's SCID interview did not indicate a full diagnosis of Major Depressive Disorder, but revealed some residual symptoms (296.25). His HRSD and GDS were 10 and 18, respectively, also reflecting the presence of residual symptoms.

Evaluation of Clinical Significance

According to cut-offs and normative data provided by Jacobson and Truax (1991), the mean HRSD score for the clinically symptomatic range is 22.03 (± 7.19) -- that is, 68% of this population scores between 15 and 29 on the HRSD. A reliable change index (RCI) of 9 points is necessary for a clinically meaningful improvement ($RCI > 1.96$). Mr. Y's average HRSD score for the pre-treatment period was 26.6, placing him in the clinically symptomatic population. His score at post-treatment was 6, indicating a decrease of 20.6 points and reflecting a clinically meaningful change at the end of treatment. His score at a 3-month follow-up was 10, also reflecting a clinically significant change from pre-treatment scores.

Visual Examination

Changes in mean. Figure 7 provides a visual comparison between baseline and treatment means for the HRSD and GDS. The mean score for baseline and treatment HRSD were 26.6 and 8.8, respectively, representing a drop of 17.8 points. Similarly, the baseline and treatment mean GDS scores were 22 and 14.3, respectively, representing a drop of 7.7 points.

Changes in level and latency. Figure 8 illustrates weekly scores for the HRSD and GDS. Data collected immediately after the introduction of treatment (i.e., after session 1, pleasant activities) indicate a drop of 13 points (from 25 to 12) and 7 (from 22 to 15) points for the HRSD and GDS, respectively (see table 5, figure 8). The pattern of these data does not indicate the presence of a latency period, as there was no delay between intervention and positive treatment effects.

Subjective mood ratings. Over the treatment course, Mr. Y reported a gradual ascent in mood ratings (see figure 9). At baseline, Mr. Y rated his mood as characterized by “some sadness” on 60% of the time and “often sad” the remaining 40% of the time. Over the treatment period, this changed to “some sadness” 60% of the time and feeling “neutral” for the remaining 40% of the time. As can be clearly seen in figure 9, as treatment progressed, his subjective mood ratings became increasingly positive. In fact, for the last two weeks of treatment he rated his mood as “neutral,” without fluctuation.

Table 5
The HRSD and GDS Scores for Mr. Y

Baseline Initial Assessment	33	22	"I just feel very badly...I am anxious and depressed. I have restless sleep with many nightmares. I am fed up with my life...with being useless and a burden on my wife."
Baseline	22	22	"I had a terrible week and had a terrible experience at the dentist. I am worried about how the depression affects my wife and son. I feel like I have become a burden. Friday was particularly bad...I felt very depressed."
Baseline	25	22	"I have no energy to do any thing. I am so tired and the depression seems to be worse in the early PM. It gets so bad I can hardly stand it. I still can not see any improvements...still terribly depressed"
After Session 1 Introducing pleasant activities.	12	15	"The afternoons are still bad. I feel much better in the evenings. I have been trying to keep track of pleasant activities. I seem to be useless, but I took some of the advice and cooked a dinner for my family. It nearly finished me, but I enjoyed it. I should do more of this"
After Session 2 Plan & increase pleasant activities	11	13	"I am meeting an old navy friend. Well, maybe, he has invited me out to chat but I am not sure I am up to it. I think the readings make sense. I am trying to do more of the things that I like. I read, but I can't concentrate for long."
After Session 3 Dealing with negative thinking	10	13	"Things are OK. I went out with an old friend and really enjoyed it. I am feeling a bit brighter. I joined the RCNBF (Royal Canadian Navy Benevolent Fund), which is an organization that reviews veteran claims. I am on the committee for reviewing these claims. It is something that I have done when I was in St. John's and I have decided to start again in Ottawa. I went twice a week. I have also approached the Jack Purcell community centre. I may do volunteer work there. I am spending lots of time with the grandchildren."
After Session 4 The thinking feeling link	8	17	"My son announced that his training in Ottawa is completed and that he wants us to move with him to his new post, which can be anywhere in Canada. I have been worrying about it. I can't think about moving again. It gets me very worried. I am still trying to get better and get busy, but I can't seem to shake my worries. I am worried about getting around to my activities in the winter. How will I get to these places."
After Session 5 Information about depression	6	16	"I have discussed the mobility problem with the VON. I am trying to make arrangements for Para-Transpo. I took a membership with HMCS (Her Majesty's Canadian Ship). It would be nice to go there and socialize with other veterans. I prefer this to sitting at home."
After Session 6 Post Assessment How to maintain gains & reusing what you learned	6	12	"I am not feeling that bad. There is an improvement that others notice (son and wife). I am happy to be busy with stuff other than the hospital. I am going to a party on the Friday the 18th and a hockey game with my son this Saturday."
Three-month Follow-up	10	18	"There are a lot of life changes coming up. We are moving and this makes me worry. It is a high cost project...and moving again just brings back bad memories...Our son is moving, and we are going with him, but I don't know if it is a good idea. I am still active, but less than before, I am busy trying to get things in order for the move..."

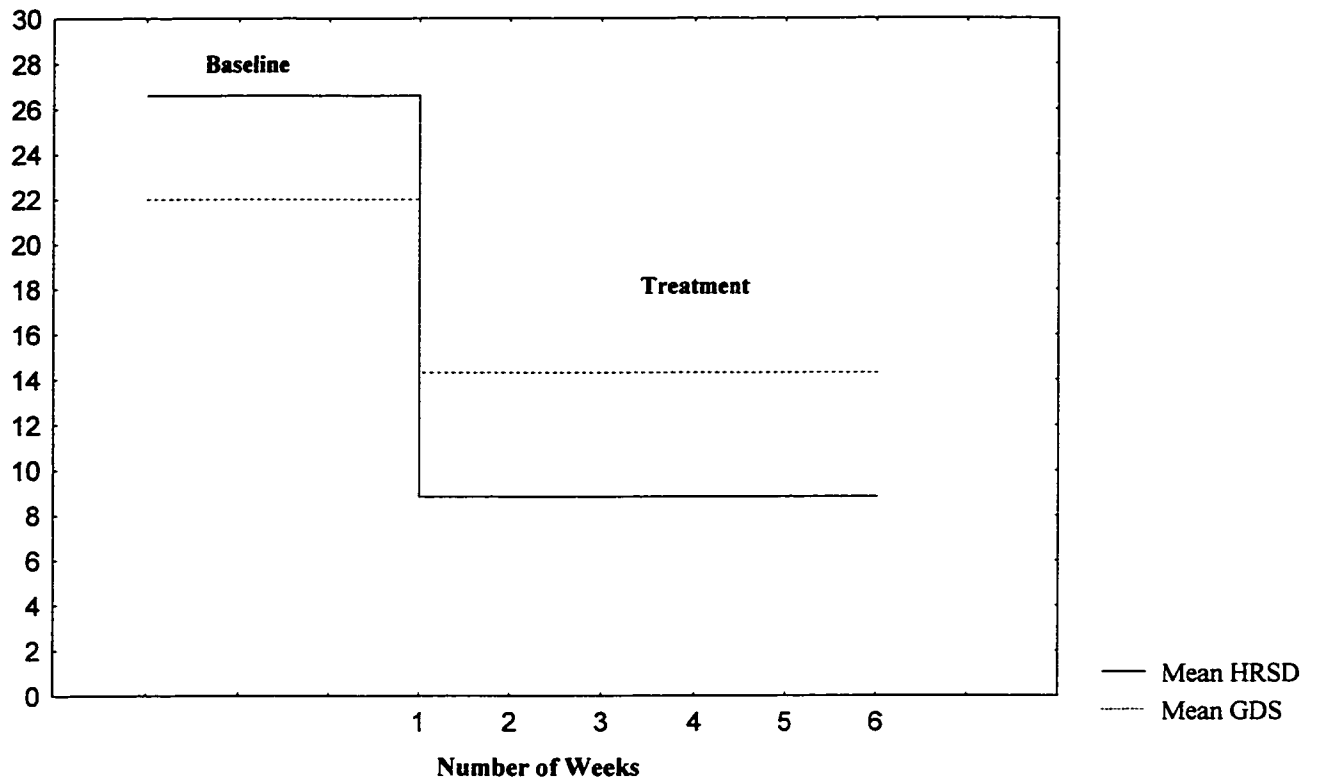


Figure 7. Changes in mean scores of HRSD and GDS over the baseline and treatment periods for Mr. Y.

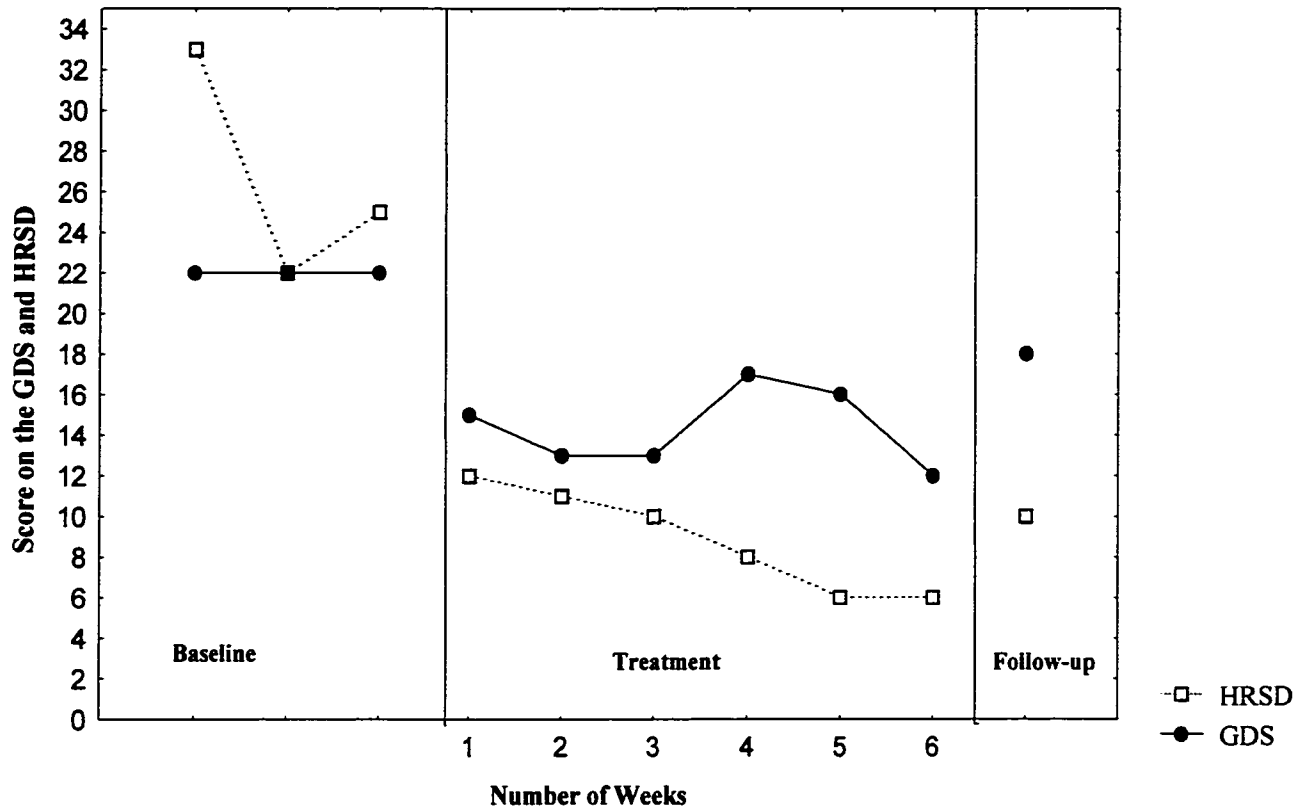


Figure 8. Scores for HRSD and GDS as a function of the baseline and treatment periods, and at 3-month follow-up.

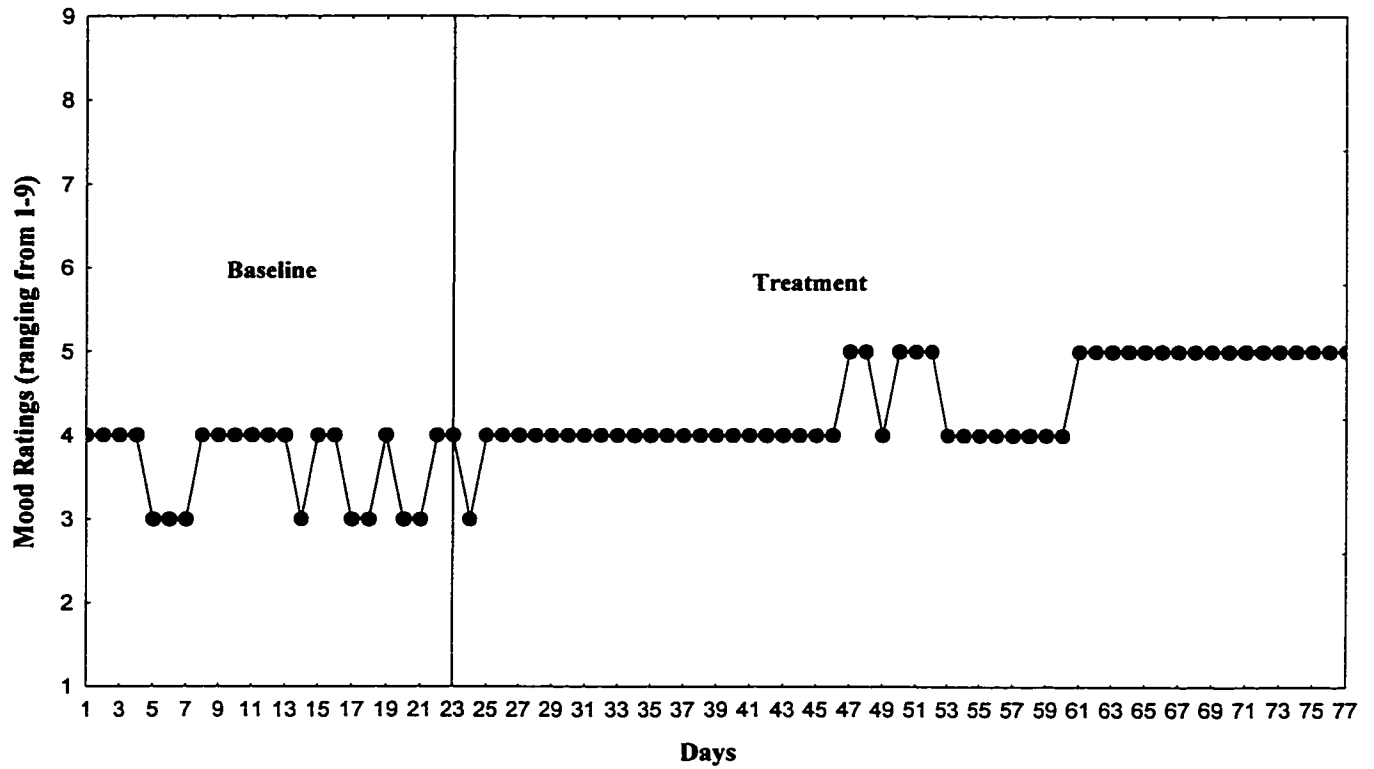


Figure 9. Daily mood ratings as a function of baseline and treatment periods.
Extreme Sadness =1; Always Sad =2; Often Sad =3; Some Sadness =4;
Neutral =5; Fair =6; Good =7; Very Good =8; and Great Mood =9.
Higher scores indicate better mood.

Results: Evaluating Functional Capacity

The following multiple aspects of functional capacity were assessed at pre- and post-treatment, and at a 3-month follow-up: health status, mobility, activities of daily living and instrumental activities of daily living, mental functioning and communication, and social functioning and activity level. The findings are presented sequentially by category of functional capacity at the three assessment points for ease of comparison. Qualitative data from the OARS and SMAF are incorporated under appropriate headings. A summary of pre- and post-treatment and follow-up SMAF scores are shown in table 6.

Health Status

Pre-treatment. Mr. Y's OARS indicated that he visited his doctor nearly 24 times in the past 6 months. Mr. Y reported that he often has days when he feels extremely unwell, to the point of being unable to carry on with his usual activities. In the past 6 months, he reported having spent about 45 days in the hospital for cancer treatment and other related health complications. Mr. Y was diagnosed with cancer of the throat, mouth, and tongue about two years ago. He underwent chemotherapy for nearly 6 months (January, 1997 - August, 1997). As a consequence of these treatments, Mr. Y reported having lost his sense of taste and suffers from a severely dry mouth. These conditions have interfered with his appetite, and he reported having lost 50 lb. in the past 6 months. He was hospitalized several times for malnutrition, dehydration, and anemia. Mr. Y mentioned that he suffers from chronic fatigue. His cancer is currently in remission. In addition, Mr. Y reported suffering from arthritic pain in his knees. He requires a

hearing aid because of a broken ear drum suffered in the Korean war. Mr. Y's vision was adversely affected by the chemotherapy, but is adequate with correction. He rated his overall health as good, although he believed that recent developments in his health -- in particular, lack of energy as a side effect of cancer treatments -- have interfered with his ability to remain active and participate in preferred activities. He was rated as moderately physically impaired on the OARS summary subscale.

Post-treatment. Mr. Y's condition remained stable, although he was undergoing tests in order to determine if his cancer was controlled. He also mentioned that his anemia may be returning, requiring some treatment. He rated his health as fair and stable over the past five years.

Follow-up. Mr. Y reported that his cancer remained in remission and that there were no major changes in health condition. However, he supported having suffered two extremely long periods of the flu combined with some complication to the lungs, which did not require hospitalization. He rated his health as fair and stable.

Table 6
Scores for the SMAF Assessment at Pre- and Post-treatment,
and at the 3-Month Follow-up

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Mobility	-1/-18	-1/-18	0/-18
ADLs	-2/-21	-1/-21	-1/-21
Instrumental ADLs	-7/-21	-5/-21	-6/-21
Mental Functioning	-2/-15	-2/-15	-2/-15
Communication	-2/-9	-1/-9	-1/-9

Total scores on each category of functioning are determined by the level of disability. Items in the respective category have 4 classifications of disability: complete autonomy (0); requires supervision (-1); requires help (-2), and total dependence (-3). Higher total scores indicate more serious disability in each category and 0 indicates no impairment.

Mobility

Pre-treatment. Mr. Y is ambulatory, but has extreme fatigue which affects his activity level. His knee problems limit his use of public transportation, and he rarely feels alert enough to drive. Mr. Y reported that he can negotiate stairs with some effort. He mentioned that the advent of winter is likely to curtail his ability to leave home.

Post-treatment. Mr. Y reported that he did some walking for exercise, but that it was difficult to walk outdoors. He used special transportation and was often driven by his son. Mr. Y was able to compensate for most of his mobility problems, which did not constitute an area of serious impairment. There was no change from pre-treatment status with respect to mobility.

Follow-up. Mr. Y reported that he had been able to get around quite well and was able to make the necessary arrangements to arrive at nearly all of his destinations without difficulty. He reported that he often walked outside for short distances, such as to the corner store and to his local clinic. Mr. Y's mobility showed no impairment at follow-up.

Activities of Daily Living and Instrumental Activities of Daily Living

Pre-treatment. Mr. Y's SMAF assessments indicated that he was able to carry out most of the activities of daily living independently. However, because of cancer complications, he had no motivation to eat and often required encouragement and reminders to maintain proper nutrition. Mr. Y was unable at this time to participate in meal preparation or household chores. These instrumental tasks had been completely taken over by his spouse, and son who lives in the same apartment complex.

Post-treatment. Mr. Y's status with respect to activities of daily living did not change at post-treatment, as he was able to carry out self-care independently. However, he reported that at times he needed reminders to eat. The SMAF assessment indicated that he needed help with house chores and meal preparation. His VON nurse helped him regulate his medication.

Follow-up. Mr. Y's SMAF indicated no substantial changes in his ability to perform activities of daily living or instrumental activities of daily living. He reported that occasionally he needed reminders to eat. His SMAF assessment also indicated that he required help with laundry, meal preparation, shopping, and general housekeeping.

Mental Functioning and Communication

Pre-treatment. His score on the 3MS was 96/100 (and a derived score of 30/30 on MMSE). His memory, orientation, and comprehension appeared normal. Mr. Y's ability to abstract, as indicated by his scores on the Similarities section of the 3MS, appeared less certain. He was cognitively present during the interview and was able to express himself without any difficulty. Though his memory was intact on the 3MS, he mentioned difficulties keeping track of names and appointments. He described himself as an avid reader and appeared to be up-to-date on current world events. He has his own power of attorney and makes sound decisions with respect to finances (though with much input from his son). He required a hearing aid, and had to be spoken to loudly.

Post-treatment. On the SMAF assessment, Mr. Y reported believing that he suffered from minor memory deficits. His mental functioning remained unchanged from pre-treatment assessment.


Follow-up. Mr. Y's SMAF assessment did not indicate changes from previous assessments.

Social Functioning

Pre-treatment. Mr. Y's social life had been curtailed by his move from St. John's, Newfoundland. He had no friends and few relatives in Ottawa. He mentioned that he only visited his son, who lives nearby. Mr. Y usually visited or went out with his son on the weekend and often telephoned him during the week. He mentioned that his wife and son were of great support to him, but regretted the lack of other social contacts. He reported that, while in St. John's he enjoyed a full social life, and it was difficult to compensate in a new environment. He mentioned finding the move and the atmosphere of a new city to be overwhelming, and he felt too anxious to initiate contact with anyone outside of his family circle. His social functioning was rated as moderately impaired on the summary scale of the OARS Social Resources subscale.

Post-treatment and follow-up. Table 7 illustrates the change in Mr. Y's social functioning over the course of treatment. This is reflected in self report (table 5) and in the reported number of pleasant activities per week. An estimate of activity level at a 3-month follow-up is obtained from the verbal report regarding number of activities carried out in an average week since the termination of treatment.

Table 7
A Summary of the Number of Pleasant Activities Per Week

	
Week One	33
Week Two	38
Week Three	39
Week Four	39
Week Five	42
Week Six	46
Follow-up at 3 Months	Estimated at around 28 per week

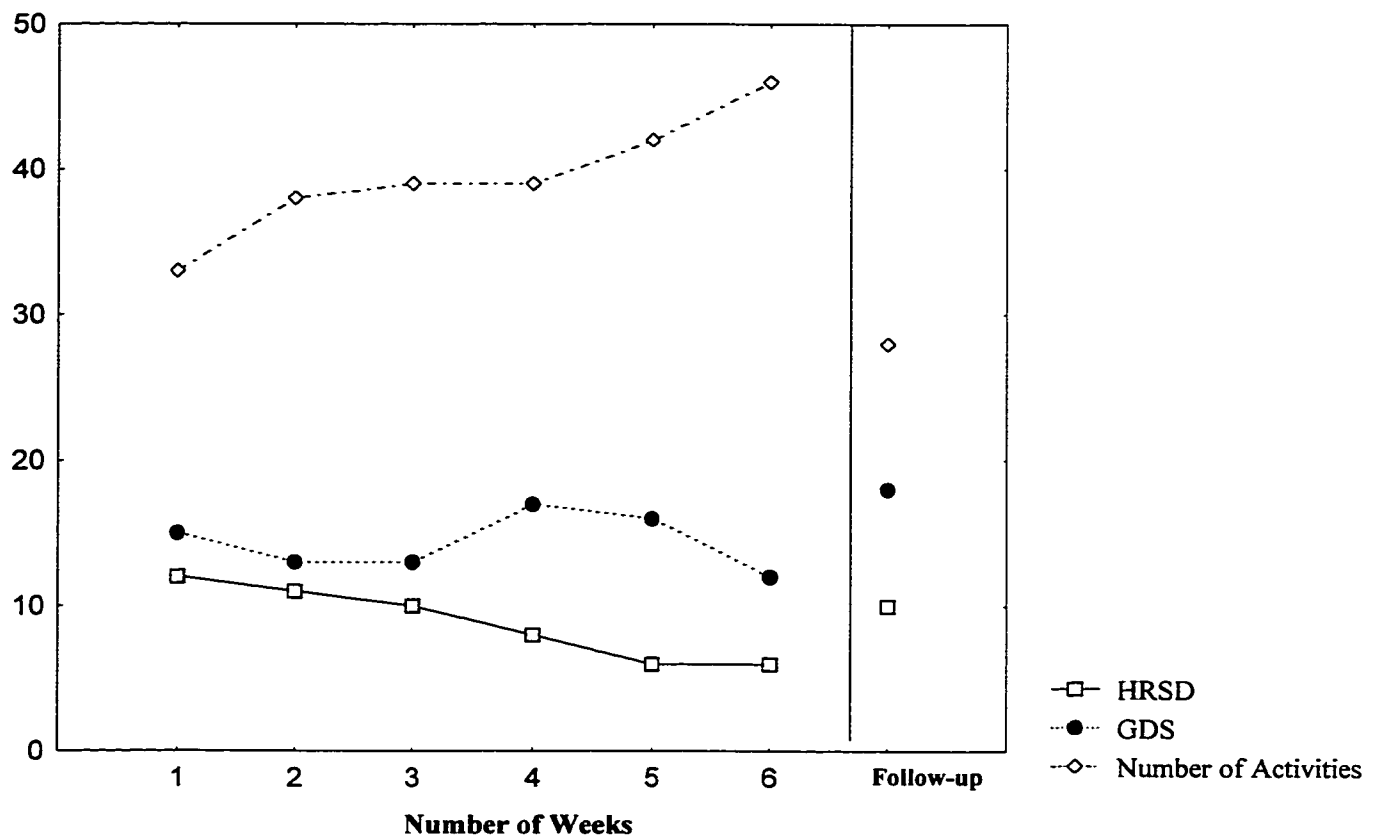


Figure 10. The level of activity plotted as a function of the treatment course and at follow-up superimposed on mood indices.

Summary and Discussion for Case 4

Treatment data indicated positive results. Post-treatment evaluation indicated that Mr. Y's depressive symptoms had, for the most part, remitted and that he no longer met the DSM-IV criteria for a current major depressive episode. The severity of symptoms was reduced, moving from severe to mild levels of depression. This categorical change in diagnostic status is also corroborated by self-report and the observation of others; for example Mrs. Y mentioned to the VON nurse that her husband "appeared more alert and brighter."

Changes over time were also demonstrated. First, Mr. Y's average mood scores on structured instruments were much lower during treatment than baseline (Figure 7). Indeed, scores on the GDS, which showed no change over baseline, decreased significantly immediately upon introduction of treatment. However, during weeks 4 and 5, the HRSD scores showed a notable increase (i.e., an increase in depressive symptomatology). This can be explained in terms of the stressful life events that occurred around the same time (see Table 5 for unstructured self report and HRSD scores). His son had been offered a post with the federal government anywhere in Canada and had suggested that that Mr. Y and his wife accompany their move. Mr. Y reported that this caused him a great deal of anxiety and negatively impacted on his mood.

There was a pronounced abrupt decline in mood symptoms directly after the introduction of treatment. This indicated a rapid impact of treatment on Mr. Y's mood. Within a week of the introduction of pleasant activities, Mr. Y was reporting symptoms of a mild to moderate nature, rather than severe.

Importantly, there was no time lag between the introduction of treatment and the appearance of improvement. This supports the hypothesis that pleasant activities and their appropriate implementation were directly responsible for mood improvements. The graphical representation, in figure 10, of the number of pleasant activities documented during treatment and the correspondent changes of mood illustrates this point. Activity scores appear as a mirror image of mood scores on structured instruments. In other words, when activity levels increased, mood symptoms decreased. In contrast, when there are fewer pleasant activities, mood symptoms increased. This intervention actively manipulated the level of pleasant activities for the client, involving a great deal of restructuring of daily life and overcoming practical obstacles. Mr. Y responded well to this form of treatment and has developed new activities, which are now incorporated into his daily routine.

At follow-up, Mr. Y's level of functioning remained rather stable, with the exception of some noted improvements in his mobility. This is a good indicator that some effort is maintained to protect treatment gains. However, Mr. Y's estimate of the number of pleasant activities engaged in over an average week had dropped. This estimate must be treated with caution, however, as it relied heavily on the participant's memory and was not based on precise daily monitoring. At the time of follow-up assessment, Mr. Y was also experiencing high levels of anxiety and some residual depressive symptoms. He reported that this was due to an impending second move out of the Ottawa area in order to join his son. It is understandable that this kind of anxiety lowered his level of motivation and interest in his previously established routines.

Case 5

Personal Information

Ms. S is a 72-year-old woman of Italian origin. She moved to Canada with her husband at age 26 and worked as a dress maker. Prior to her move to Canada, Ms. S described her life as difficult. The family was poor, and her mother died when she was 14. As a consequence, she was left in charge of three younger siblings. Her father was harsh and often administered physical discipline. Ms. S had two children, a daughter, who is a homemaker and with whom she has regular contact, and a son, who died at age 19 of a brain aneurysm. Her husband passed away three years ago after a long illness.

Psychiatric History

Ms. S reported being currently tense and depressed. She mentioned two distinct episodes of depression in the past. The first episode of sadness was experienced around the death of her mother and lasted for several years. The second occurred as a result of the sudden death of her son. Ms. S was in Canada when her son died and she was hospitalized for severe depression.

Results: Evaluating Depression

Depression at Pre-treatment

At pre-treatment, Ms. S acknowledged being depressed, but denied any interest in suicide. According to the SCID interview, Ms. S's condition met the criteria for a diagnosis of 296.32 Major Depressive Disorder, recurrent. Her symptoms were rated as moderate. At initial assessment her HRSD and GDS scores were 23 and 20, respectively.

These scores indicated a moderate level of depression. Scores for the GDS and HRSD throughout the treatment program and at the 3-month follow-up are presented in table 8.

Depression at Post-treatment

At post-treatment, Ms. S's SCID indicated Major Depressive Disorder (296.35), in partial remission. Although at the time of the post-treatment interview Ms. S had been free of symptoms for several weeks, the DSM-IV required a symptom-free period of 2 months for a diagnosis of full remission. Her post-treatment HRSD and GDS scores were 4 and 6, indicating that she was free of depressive symptoms.

Depression at Follow-up

Ms. S's SCID interview indicated no change from post-treatment scores, i.e., she retained a status of Major Depressive Disorder, in partial remission (296.35). She reported some mild residual depressive symptoms. Her GDS score was 14 and her HRSD was 5, also indicating some residual symptoms.

Table 8
The HRSD and GDS Scores for Case Five

Baseline Initial Assessment	23	20	"I feel sad, lonely and neglected. I am always tired because I am depressed. I have very bad sleep – still I was in bed all week. I am depressed and disappointed but I am not crazy"
Baseline	22	19	"I was very sick for 3 days last week. I still feel very lonely, there is no one to talk to...I read aloud to myself because no one is here. The unhappiness brings about pain and fatigue"
After Session 1 Introducing pleasant activities	9	13	"I had a great week, except for feeling some stomach pain. This week was good, I had a good time with my daughter (I tried to enjoy her visit). I liked what I read {re. pleasant activities}, it makes a lot of sense and describes my situation well.
After Session 2 Plan & increase pleasant activities	7	12	"I discussed the reading with Helen (VON nurse). I am really enjoying them and I feel I can make some changes. I cannot change the world, but I can change something. I am going to try and be more independent and make the best of my life"
After Session 3 Dealing with negative thinking	7	8	"I will try not to be bothered by small things. My head is a lot clearer this week, perhaps I was tired due to over-medication. I don't take my sleeping pill any more, I feel better"
After Session 4 The thinking-feeling link	5	6	"Things are O.K.! my mood is O.K. I have been feeling tired, but I am trying to walk and do things around the house -- I have been going to church and I went to my daughter's for dinner. It was nice -- I stayed for only an hour, but I enjoyed it"
After Session 5 Information about depression	12	17	"I was very ill and passed out at church...and was hospitalized at the Civic. I have been resting in bed for a long time. No energy and no appetite. I am having a bad week"
After Session 6 Post Assessment How to maintain gains & reusing what you learned	4	6	"I am much better and having a good week. I am eating better...I made my mind to look on the bright side (my husband is not coming back). I just need a little company and then I am happy. I am more positive and my memory is better"
Three-months Follow-up	5	14	"I feel O.K. I am trying to keep away from things that upset me. I feel like I have changed. It is better since I couldn't change any one else, even my daughter. My headaches are still bad, but I am learning how to deal with the pain. I am thinking of relocating to Florida"

Evaluation of Clinical Significance

According to cut-offs and normative data provided by Jacobson and Truax (1991), the mean HRSD score for the clinically symptomatic range is 22.03 ± 7.19 , i.e., 68% of this population scores between 15 and 29 on the HRSD. A reliable change index (RCI) of 9 points is necessary for a clinically meaningful improvement ($RCI > 1.96$). Ms. S's average HRSD score for the pre-treatment period was 22.5, placing her in the clinically symptomatic population. Her score at post-treatment was 4 -- a decrease of 18.5 points, which reflects a clinically meaningful change at the end of treatment. Her score at the 3-month follow-up was 5, also reflecting a clinically significant change from pre-treatment scores.

Visual Examination

Changes in mean. Figure 11 illustrates a visual comparison between baseline and treatment mean scores for the HRSD and GDS. The average HRSD score during the baseline phase was 22.5 and dropped to 7 at treatment. Similarly, the average GDS score was 19.5 during baseline and dropped to an average score of 10.3 at treatment.

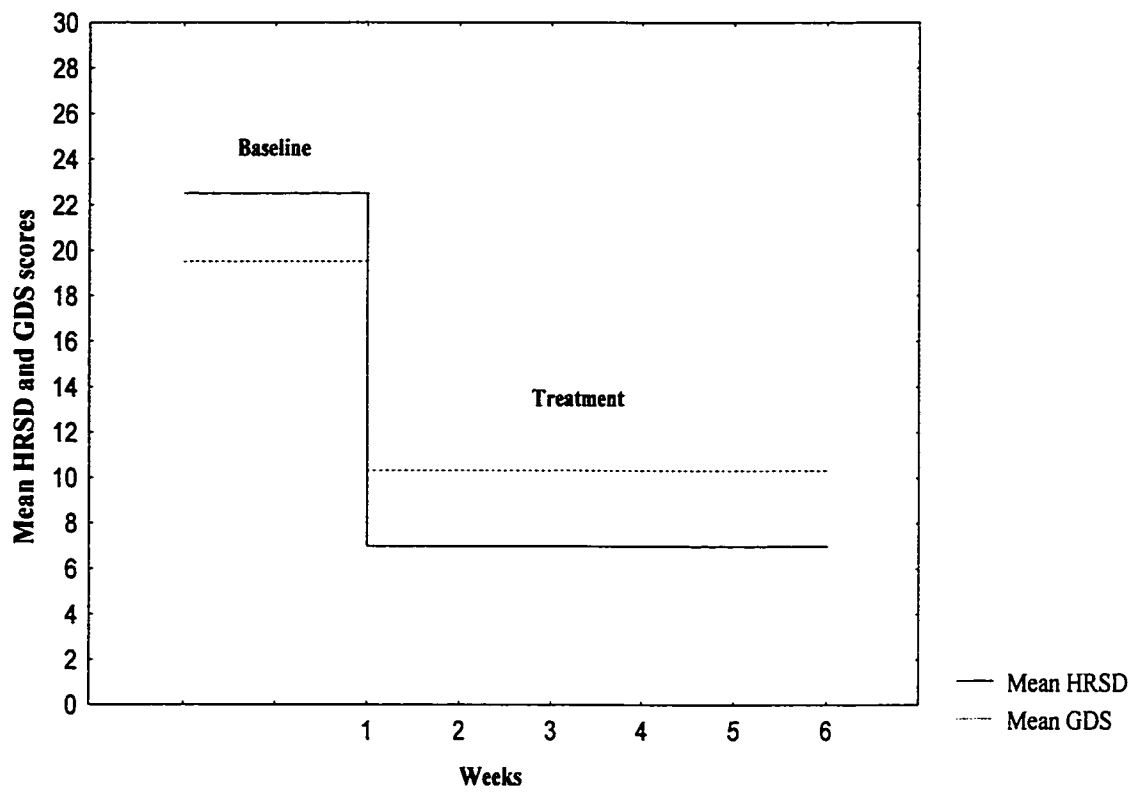


Figure 11. Changes in the mean scores of the HRSD and GDS over the baseline and treatment periods for Ms. S.

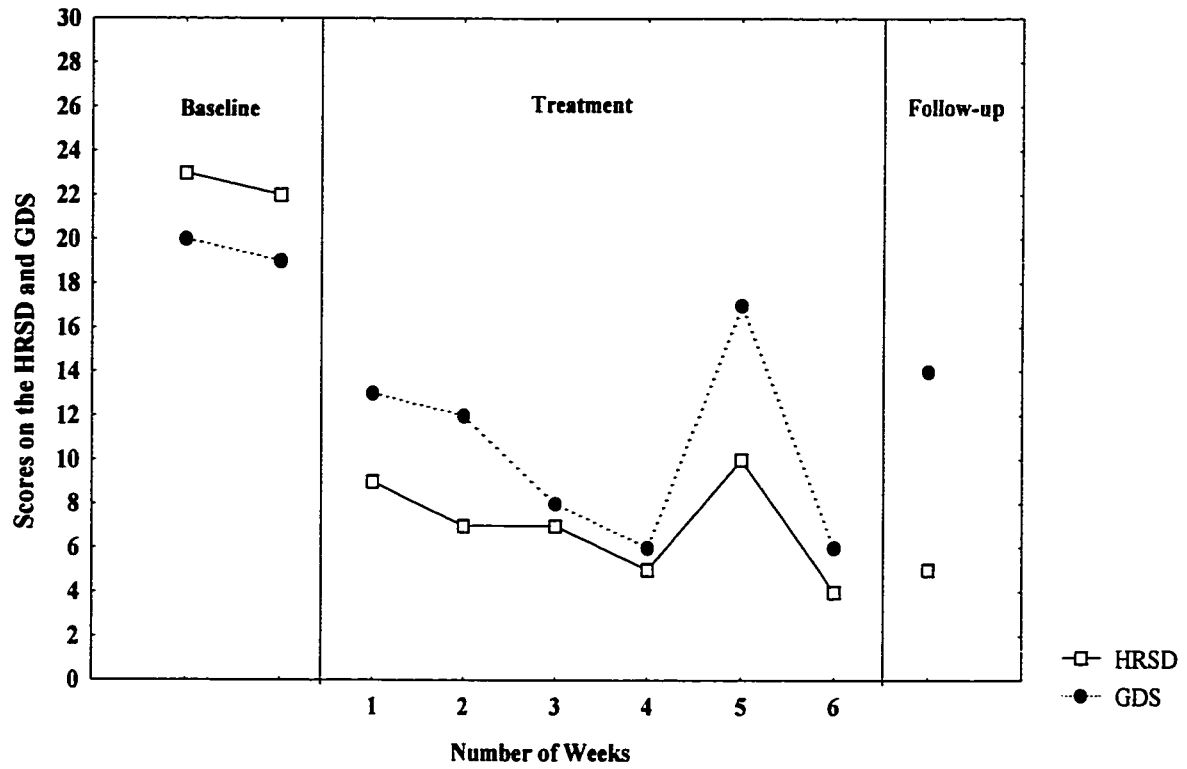


Figure 12. Scores for the HRSD and GDS observed during the baseline and treatment phases, and at the 3-month follow-up.

Changes in level and latency. First, there were substantial changes in level for this client. The HRSD demonstrated a drop of 13 points (from 22 to 9). Similarly, the GDS showed a drop of 6 points (from 19 to 13). These changes in level show the largest drop observed during the treatment phase. Second, as a consequence of this definitive change in level, no latency was observed for this participant, i.e., the largest response occurred directly after the introduction of treatment. Figure 12 shows HRSD and GDS scores over the treatment and baseline periods.

Subjective mood ratings. Ms. S's mood rating demonstrated a tremendous degree of fluctuation (see figure 13). Her ratings indicate that she continued to experience depressed affect for about a week after the introduction of treatment. In her second week of treatment she ranged widely from ratings of "neutral" to "extreme sadness". During the third week of treatment, her ratings went up to "good". She, then, experienced a set back due to illness and the intervention was interrupted for several weeks, as Ms. S was hospitalized for health problems. Upon her return home, her subjective ratings were again alternating between "fair" and "good".

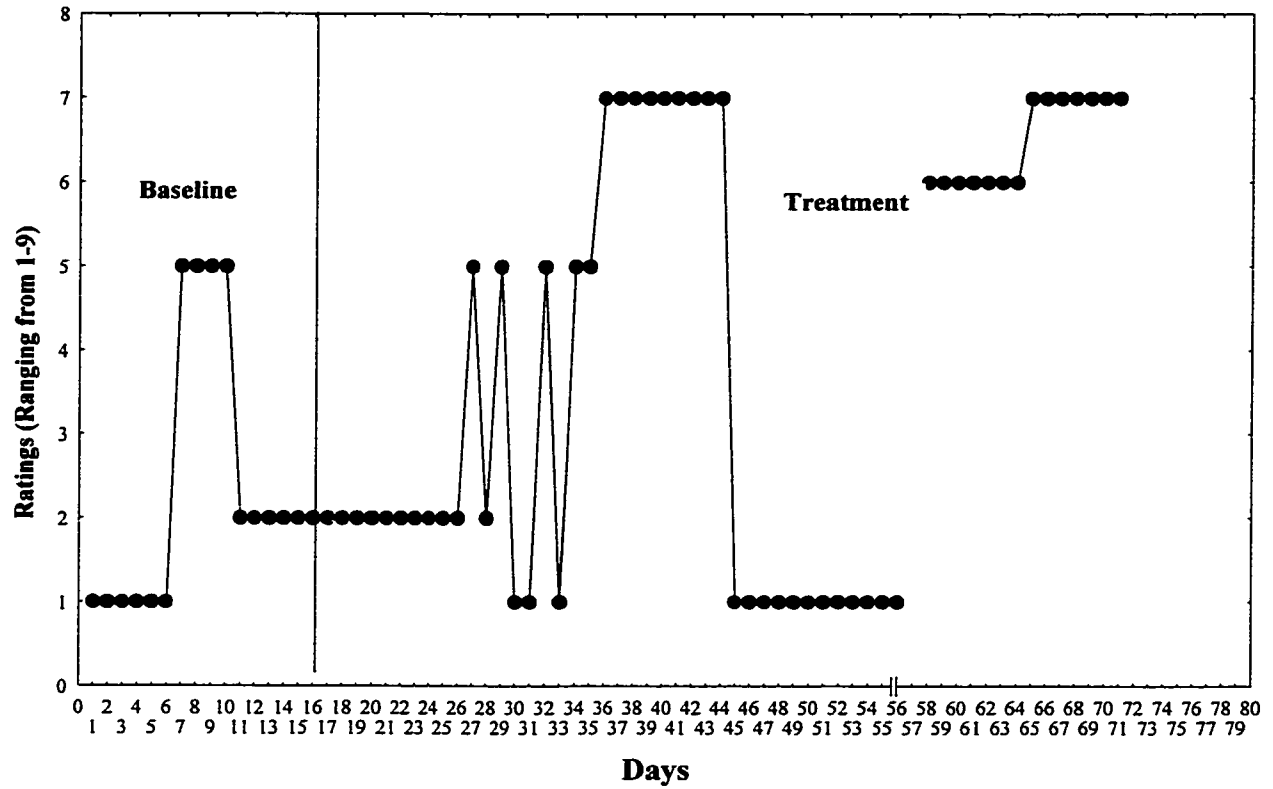


Figure 13. Daily mood ratings as a function of baseline and treatment periods.
 Extreme Sadness =1; Always Sad =2; Often Sad =3; Some Sadness =4;
 Neutral =5; Fair =6; Good =7; Very Good =8; and Great Mood =9.
 Higher scores indicate better mood.

Results: Evaluating Functional Capacity

The following multiple aspects of functional capacity were assessed at pre- and post-treatment, and at the 3-month follow-up: health status, mobility, activities of daily living and instrumental activities of daily living, mental functioning and communication, and social functioning and activity level. The findings are presented sequentially by category of functional capacity at the three assessment points for ease of comparison. Qualitative data from the OARS and SMAF are incorporated under appropriate headings. A summary of pre- and post-treatment and follow-up SMAF scores is shown in table 9.

Health Status

Pre-treatment. Ms. S's OARS assessment indicated that she visited her doctor about 30 times in the past six months and was hospitalized twice (for a total of 40 days) for treatment of stomach cancer that is now in remission. Ms. S was diagnosed with diabetes about 10 years ago. In addition, she reported suffering from extreme headaches related to an inoperable sinus tumour and has lost her sense of smell. She also suffers from serious arthritis. She rated her overall health as poor with "some ok days," and perceived that her health condition interferes with her ability to remain active and involved in preferred activities. She was rated on the OARS Health subscale summary as moderately-severely physically impaired.

Post-treatment. Two weeks before the end of treatment Ms. S became ill. She suffered from a loss of consciousness, resulting in a serious fall, and was hospitalized for two weeks. Ms. S reported that that her tests were negative and that the specific cause for

this event was unclear. She also reported that the fall caused back and neck aches. There were no other reported changes in her health status since pre-treatment assessment.

Follow-up. There were no major changes in Ms. S's health status since pre- and post-treatment assessments.

Mobility

Pre-treatment. At pre-treatment, Ms. S was ambulatory, although she often required a cane or a walker. She reported that her arthritic condition and low energy level often adversely affected her mobility. She was able to negotiate stairs in her house, but found it effortful, and has had falls in the past. Ms. S no longer drove and found that she spent much of the winter unable to go outside (see table 9).

Post-treatment. At post-treatment, Ms. S reported taking many more walks than prior to treatment, making a special effort to get outdoors. However, her functioning with respect to mobility had not changed relative to pre-treatment assessment (see table 9).

Follow-up. On follow-up, Ms. S did not report any major changes to her mobility. However, she expressed some concern regarding her ability to go outside as winter returns. She mentioned a possibility of moving to Florida.

Table 9
Scores for the SMAF Assessment at Pre- and Post-treatment,
and at the 3-Month Follow-up.

Mobility	-1.5/-18	-2/-18	-2/-18
ADLs	0/-21	0/-21	0/-21
Instrumental ADLs	-12/-21	-6.5/-21	-7.5/-21
Mental Functioning	-4/-15	-2/-15	-2/-15
Communication	-3/-9	-3/-9	-3/-9

Activities of Daily Living and Instrumental Activities of Daily Living

Pre-treatment. At pre-treatment, Ms. S's SMAF assessment indicated that she was able to carry most of her activities of daily living independently. Ms. S mentioned that she had no appetite, as she was unable to smell her food. Nonetheless, she reported preparing light meals and eating regularly. Ms. S was able to perform other activities, such as toileting and grooming without help. However, her ability to carry out instrumental activities of daily living was impaired. She received home-care services in order to maintain her home, and assistance from her daughter, who helped with shopping. Her medication was regulated by the VON using a dispenser aid. Ms. S gave her daughter power of attorney and allowed her to make financial decisions and do budgeting for her. She reported some difficulty using the telephone, except for emergencies and a few memorized numbers.

Post-treatment. At post-treatment, the SMAF assessment indicated that Ms. S's ability to carry out activities of daily living was intact. Further, although her instrumental activities of daily living showed notable improvement (see table 9) relative to pre-treatment, she remained impaired in some areas. Ms. S reported that although she received help, her ability to prepare meals had improved somewhat, largely due to her increased energy. She also mentioned being able to manage some of her own budgeting, though her daughter maintained power of attorney and handled most of the major transactions. She reported doing some housekeeping when she felt well.

Follow-up. The follow-up SMAF assessment indicated no changes in Ms. S's ability to carry out activities of daily living. Her abilities to perform instrumental

activities of daily living were rated as slightly more impaired from her post-treatment assessment (see table 9). This was because of Ms. S's increased dependence on her daughter and on home-care for assistance in carrying out these activities, especially housekeeping and meal preparation.

Mental Functioning and Communication

Pre-treatment. At pre-treatment, Ms. S's score on the 3MS was 85/100, with a derived score of 26/30 on MMSE. Her performance on the this instrument was highly impeded by her imperfect command of English and nervousness concerning intellectual assessment. Her orientation and comprehension appeared normal. Ms. S's ability to abstract, as indicated by the Similarities section of the 3MS, appeared slightly impaired. She also had difficulty with memory items. However, she was mentally present during the interview and reported spending a great deal of time reading in Italian. Ms. S was able to see well enough for ADLs and to hear adequately if spoken to loudly. In addition, Ms. S was emotionally labile during the interview. She mentioned that it was hard for her to make decisions on her own.

Post-treatment. At post-treatment, there were no large changes in Ms. S's mental capacity. However, the SMAF assessment indicated some improvement in the area of emotional regulation. She reported being much less emotional and much better at making decisions.

Follow-up. As indicated by the SMAF assessment, there were no changes in Ms. S's mental capacity since post-treatment assessment. However, she mentioned that her ability to concentrate had slightly improved.

Social Functioning

Pre-treatment. At pre-treatment, Ms. S lived alone and, in general, had limited contact with people. Her OARS assessment indicated that she saw her daughter about once a day for help and had a more social visit once a week. Her other social contact was with the VON nurse and home-care worker, which also occurred once a week. She mentioned rarely going out, except for church on Sundays, although she had not attended for many weeks. Ms. S reported feeling quite lonely and expressed a desire for more social contact. She described her social relationships, including her relationship with her daughter, as unsatisfactory. Her social functioning was rated as severely impaired.

Post-treatment and follow-up. Ms. S's OARS social resources subscale indicated notable improvements in her social functioning at post-treatment and follow-up. Table 10 represents the number of activities per week tracked throughout the treatment period and estimated at follow-up. She mentioned that her relationship with her daughter was somewhat improved and that she spent much more pleasant time with her. Also, Ms. S reported having accepted an invitation from a friend to go for a short visit. Her social functioning appeared to fit a rating of moderate social impairment, as she mentioned remaining lonely and feeling cut off from others. Figure 14 illustrates Ms. S' activity level, as monitored throughout the treatment period and estimated at the 3-month follow-up. At the 3-month follow-up, Ms. S reported that her social life was much more satisfying. She also mentioned that she decided to spend the winter in Florida, where she has many friends and was better able to move around.

Table 10
A Summary of the Number of Pleasant Activities Per Week

Week One	27
Week Two	25
Week Three	25
Week Four	25
Week Five	15
Week Six	19
Follow-Up at Three Months	Estimated at around 25 per week

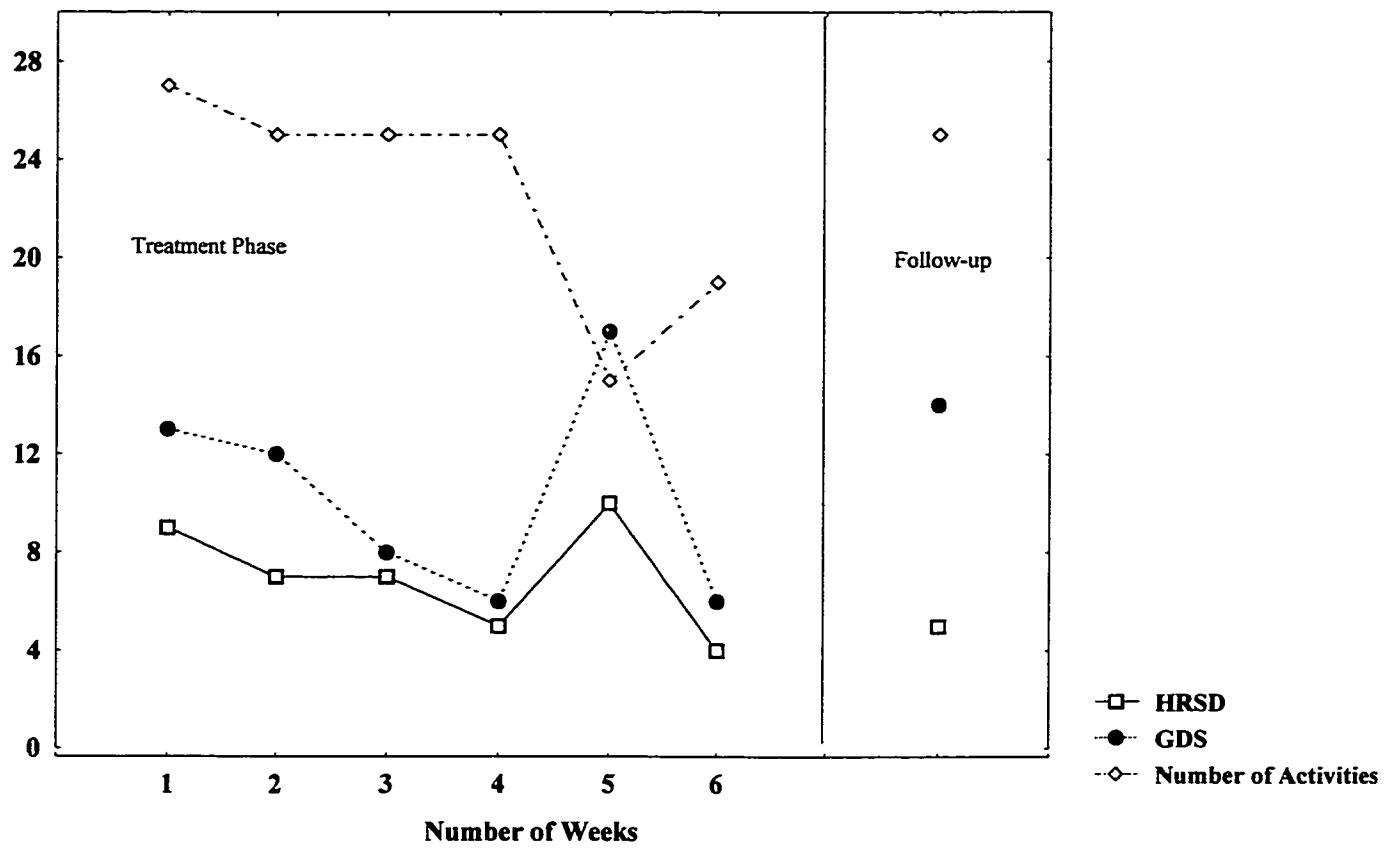


Figure 14. The level of activity plotted as a function of the treatment course and at follow-up superimposed on mood indices.

Summary and Discussion for Case 5

Data collected at baseline and during the course of treatment generally indicated positive results. Ms. S no longer met the DSM-IV criteria for a diagnosis of depressive disorder, and her HRSD and GDS also indicated remission. These findings are corroborated by Ms. S's self-report on daily mood ratings (see figure 13) and verbal reports on mood to the VON nurse (see table 8).

Changes were also demonstrated throughout the treatment course. Ms. S's initial response to treatment was pronounced and she continued to improve thereafter. Her improvements appeared directly following the introduction of treatment. However, it is worth noting that Ms. S experienced a setback due to a medical crisis. During the time of this setback, two weeks before the end of treatment, Ms. S had a higher level of depressive symptoms and lower activity level than she had been able to establish during the first three weeks of treatment (see figure 14). Nevertheless, she appeared to recover some of her gains, with respect to activity level and mood improvements, in the last two weeks of treatment. As was seen in the first case in this series (Mr. Y), when the number of pleasant activities reported during the treatment is graphed together with mood scores, a correspondance in time is apparent. For this participant, the data indicate that there was a strong relationship between the reinstatement of pleasant activities and improved mood.

Ms. S's functional capacity improved considerably in the following two areas. First, her ability to perform instrumental activities of daily living improved at post-treatment relative to pre-treatment. She became more independent, in terms of upkeep of

her house and taking care of small daily chores. This change occurred with encouragement from the VON nurse. Ms. S discussed with the VON nurse her enjoyment of being able to take care of her house, and household chores consequently came to be considered pleasant activities. Moreover, Ms. S mentioned that her increased energy and positive mood contributed to her ability to carry out many of these tasks. Second, Ms. S made considerable progress in the area of social functioning. Although her activities were not numerous, this reflected an individual preference for a quiet life. Indeed, her VON nurse recommended that she keep her activity level manageable, given her history of tiring easily.

General Discussion for Series B

This series was altered such that the pleasant activities material occurred first in the intervention – that is, in Sessions 1 and 2, rather than in Sessions 3 and 4. The purpose of this alteration was to explore the reasons for the 3-week lag in positive response to treatment observed in Series A. We had speculated that the 3-week lag could have been associated with the reinstatement of pleasant activities. Had this been the case, switching the sessions should have reduced the lag, and positive mood response should have occurred closer to the beginning of the intervention. On the other hand, had the lag simply represented a gradual mood change in response to the program as a whole, then this alteration should have had little effect. In fact, no lag was observed in this series. Both participants showed substantial mood improvements that occurred immediately after introducing the intervention. This lack of a lag supports the hypothesis of a link between pleasant activities and mood. This pattern indicates that when the participant is

committed to the idea of reinstating pleasant activities, and implements this change quickly, rapid improvement in mood soon follows.

In the final study, Series C, we replicated this effect, and included further modifications and refinements to the intervention.

SERIES C

The pattern of results observed in Series B provided evidence of a significant link between reinstating pleasant activities and mood improvement. The present series was designed as a replication study. In addition, we gathered estimates of baseline activity levels to provide a control comparison for baseline and treatment activity level. Collecting information about activity levels prior to treatment, however, would require that participants begin thinking about, and tracking, pleasant activities before the treatment has begun. This would probably introduce a confound, as an active ingredient in the intervention would now possibly be introduced during the baseline. To overcome this potential methodological problem, we asked participants just prior to the beginning of treatment, to simply give an estimate of their activity level. At the time of this estimate, participants had not been exposed to any treatment material and would not have been influenced by knowledge of the link between pleasant activities and mood.

In addition to collecting this estimate of baseline activity level, we examined the reliability of the scoring of HRSD data in Series C. A second rater, blind to the sequence of sessions, rated randomly-ordered, audio-recorded HRSD interviews. Inter-rater reliabilities were computed overall, and for each session.

Case 6

Personal Information

Mr. R was interviewed in late February. He is a 71-year-old, married man, who has nine adult children. He grew up in the Ottawa area, left home at age 13, and worked in construction. Mr. R reported that, at age 16, he started building a name for himself in

this field, and recruiting contracts. Later, he managed to save enough assets to start a small construction company, which, after about 10 years, became a large success. Mr. R reported that he secured enough contracts to own a multi-million dollar corporation. In 1975, he developed a serious cardiovascular condition and he was hospitalized for open-heart surgery, after which he was indisposed for several months. During this period, he feels that an associate mismanaged the finances of his company. Upon his return to work, he was shocked to find that most of his assets had been liquidated and his cash bank accounts emptied. He attempted to salvage the company's finances, but reported that the remaining recoverable accounts and contracts had been taken over by bank foreclosures. Payments for his business and personal insurance had been defaulted on and he was unable to receive benefits. Because of this setback, combined with health problems, Mr. R. became unable to work. In 1980, he went through another heart operation. Finally, in 1994, he suffered a cardiac arrest, and, according to his report, was clinically dead for six minutes before resuscitation.

Psychiatric History

Mr. R described himself as driven and hard-working. He mentioned that he was well-adjusted and loved his work. He described a happy married life and a good relationship with his children. His first experience of depression was directly related to the failure of his business and accompanying financial losses. He described his depression as akin to periods of "intense grief." Mr. R received outpatient treatment for depression at a local hospital. He reported having long periods of wellness. However, in the last two

years, he had become increasingly depressed, especially because of his deteriorating health and multiple disabilities.

Results: Evaluating Depression

Depression at Pre-treatment

At pre-treatment, Mr. R acknowledged being depressed but had no thoughts of suicide. According to his SCID interview, his condition met the diagnosis of Major Depressive Disorder, recurrent (296.32). His symptoms were coded as moderate. His HRSD and GDS scores were 14 and 24, respectively. His HRSD indicated a moderate level of depression, whereas his GDS score indicated a higher level. Scores for the HRSD and the GDS are presented in table 11 and figure 16.

Depression at Post-treatment

At his final session, Mr. R's SCID indicated that his depression had partially remitted (296.35). He reported being free of symptoms for nearly three weeks; however, the DSM-IV requires a symptom-free period of two months for a diagnosis of full remission. Mr. R's HRSD and GDS scores were 1 and 5, respectively. By and large, these scores were indicative of recovery (see table 11).

Depression at Follow-up

For the 3-month follow-up, Mr. R preferred a telephone interview and sent his response to the GDS by mail. His SCID indicated recovery (296.36). His HRSD score was 3 and his GDS score, mailed about a week later, was 3.

Table 11

The HRSD and GDS Scores for Mr. R

Baseline Initial Assessment	14	24	"I have had a terrible life. Things happened to me that cannot be fixed. I am useless, I cannot help my wife, I cannot help my children, and I cannot help myself. I was not always like this..."
Baseline	13	22	"I had a visit from my granddaughter, and I couldn't enjoy it. I feel sad and irritable, I don't want to talk with anyone"
After Session 1 Introducing pleasant activities.	12	24	"I feel poorly, I cannot even walk to a place and do the things I want do. I never get out or get exercise. I feel like a prisoner...the reading made sense, but I cannot do anything, so what is the point of talking about it..."
After Session 2 Plan & increase pleasant activities	9	25	"I have done one thing I am proud of, I took my own bath today. I feel good about that. I do want to get out, I miss my activities. I want to be with lots of people. Maybe I can try to do more, but it is hard. It is my health that gets in the way"
After Session 3 Dealing with negative thinking	14	22	"Easter weekend was good. I went to see my son at his home & had a good time. I am thinking I should get the car ready for driving, perhaps I can go around the block in it or drive my wife to get groceries. I am out of practice and a little worried, but I do want to do more. I am still down. I am down about not being able to do as much as I like, and sometimes I feel like I never will. I have lots of pains and aches. I am worried about having to adjust my pacemaker. It could be a serious problem."
After Session 4 The thinking feeling link	2	7	"I am feeling good. I have been going out quite a bit. I have two sons with different offices (business in construction) and I went there and helped to answer the phone. I hang out outside the office in the garden. I went three times this week. I am feeling better. I did what you said and it seems to work. It worked, so I do more"
After Session 5 & 6 Information about depression & How to maintain gains & reusing what you learned	1	5	"I am feeling much better. My energy is so improved. I feel good about being able to feel good again. Going out helps me forget about my pains and aches. I am sorry we have to hurry things. I am going to my sons summer cottage and won't be back till September. I am looking forward to that. It will be good for me. I miss my children. They visit more and I think it is because I feel better and I talk to them
Three months Follow-up	3	3	"I am still feeling good. Everything is O.K. I had a great time at the summer house and then I accepted an invitation to my other son's cottage. I had a good summer."

Evaluation of Clinical Significance

According to cut-offs and normative data provided by Jacobson and Truax (1991), the mean HRSD score for the clinically symptomatic range is 22.03 ± 7.19 – that is, 68% of this population scores between 15 and 29 on the HRSD. A reliable change index (RCI) of 9 points is necessary for a clinically meaningful improvement ($RCI > 1.96$). Mr. R's average HRSD score for the pre-treatment period was 13.5, placing him in the clinically symptomatic population. His score at post-treatment was 1, a decrease of 12.5 points, which reflected a clinically meaningful change at the end of treatment. His score at the 3-month follow up was 3, which continued to reflect a clinically significant change from pre-treatment scores.

Visual Examination

Changes in mean. Figure 15 illustrates a visual comparison between baseline and treatment means for the HRSD and GDS. The HRSD mean score at baseline was 13.5, and at treatment it was 7.6 -- a drop of 5.9 points. Similarly, the GDS mean score was 23 at baseline. It dropped 6.4 points during the treatment phase to 16.6.

Changes in level and latency. Figure 16 illustrates weekly scores for the HRSD and GDS. Data collected immediately after the introduction of treatment (i.e., Session 1, pleasant activities) showed little change in level. The GDS increased from 22 to 24, and the HRSD decreased from 13 to 14 (see table 11 and figure 16). In addition, substantial improvement in mood appeared in the fourth session, demonstrating a latency of three weeks.

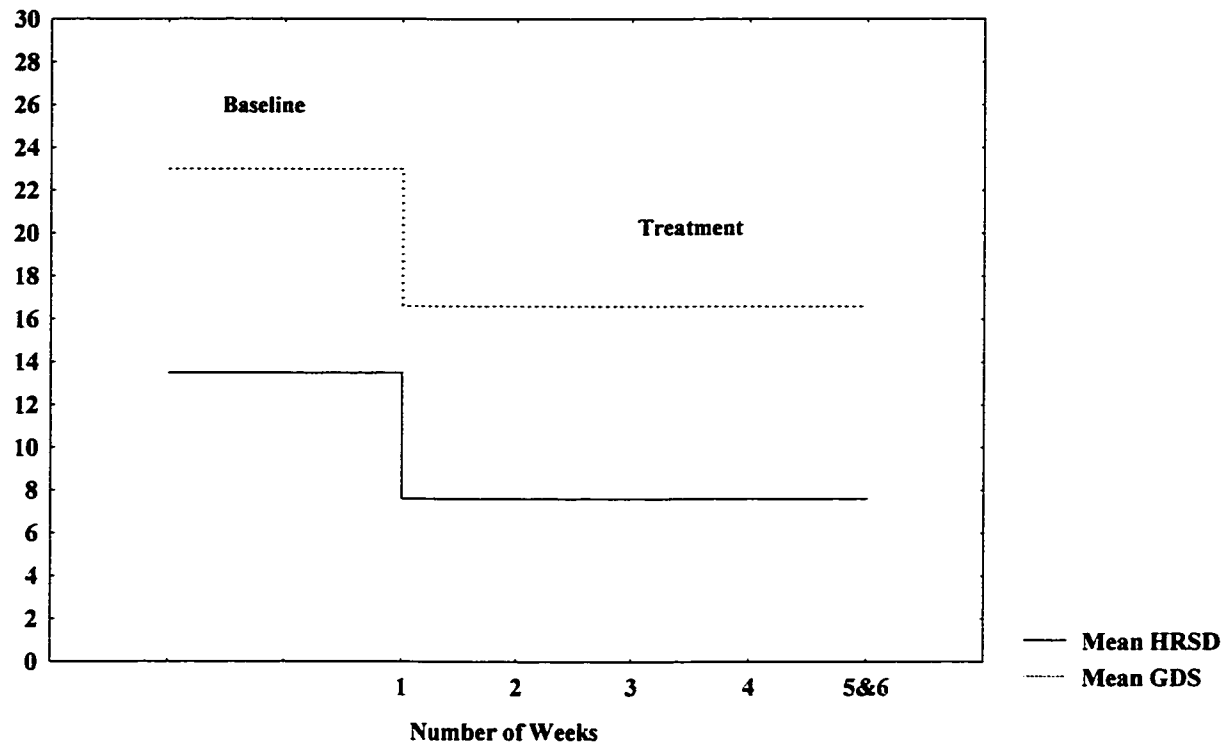


Figure 15. Changes in mean scores of HRSD and GDS over baseline and treatment period for Mr. R.

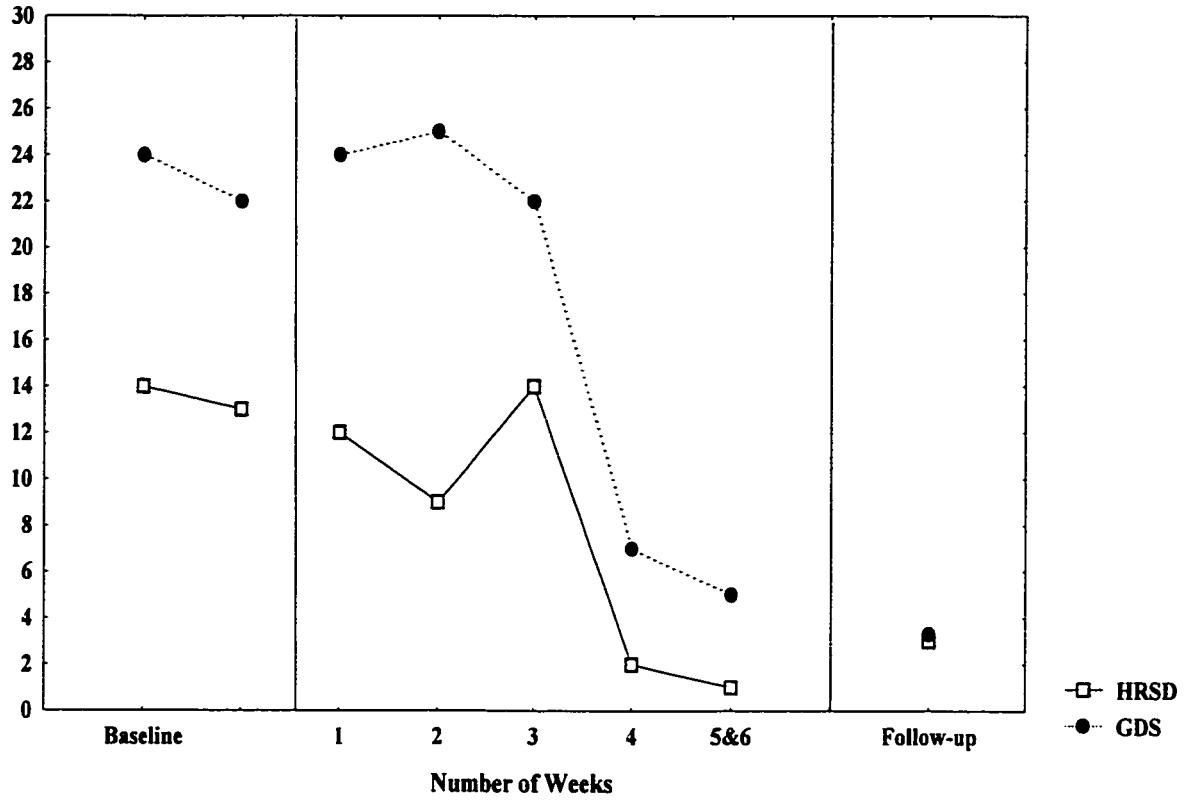


Figure 16. Scores for the HRSD and GDS for the baseline and treatment period, and at 3-month follow-up.

Subjective mood ratings. Mr. R's subjective daily mood rating frequently showed notable fluctuation, and although meeting stability criteria for the baseline phase, his ratings ranged from 2 (always sad) to 4 (some sadness). There were also large fluctuations during the treatment period with ratings ranging from 1 (extreme sadness) to 7 (good mood). However, more positive ratings (i.e., greater than 5, corresponding to "neutral" or better) were concentrated toward the end of treatment (see figure 18).

Inter-rater Reliability

Recorded weekly assessments for the HRSD were scored in randomized order by an independent rater. Several indices were used to examine inter-rater reliability: session-by-session and overall percent agreement, Pearson's R, and unweighted Kappas. Table 12 presents these results. It is important to note that recordings started on the second session, in order to protect rapport (it was difficult to obtain participant agreement to record during the first interview). As can be seen from these results, percent agreement remained quite high for all sessions. However, for sessions four and seven, although percent agreement was high, Pearson's R and Kappa were lower. The two latter measures are highly sensitive to base rate (or variability). That is, if a high proportion of the ratings falls into one category, both Pearson's R and Kappa are lowered due to restricted variability. This is a statistical artifact and a limitation of these indices, and does not bear directly on inter-rater reliability in cases of high agreement (in this case chance agreement was 20%). Kappa computed for session four remained significant, and Kappa for session seven approached significance ($p < .07$).

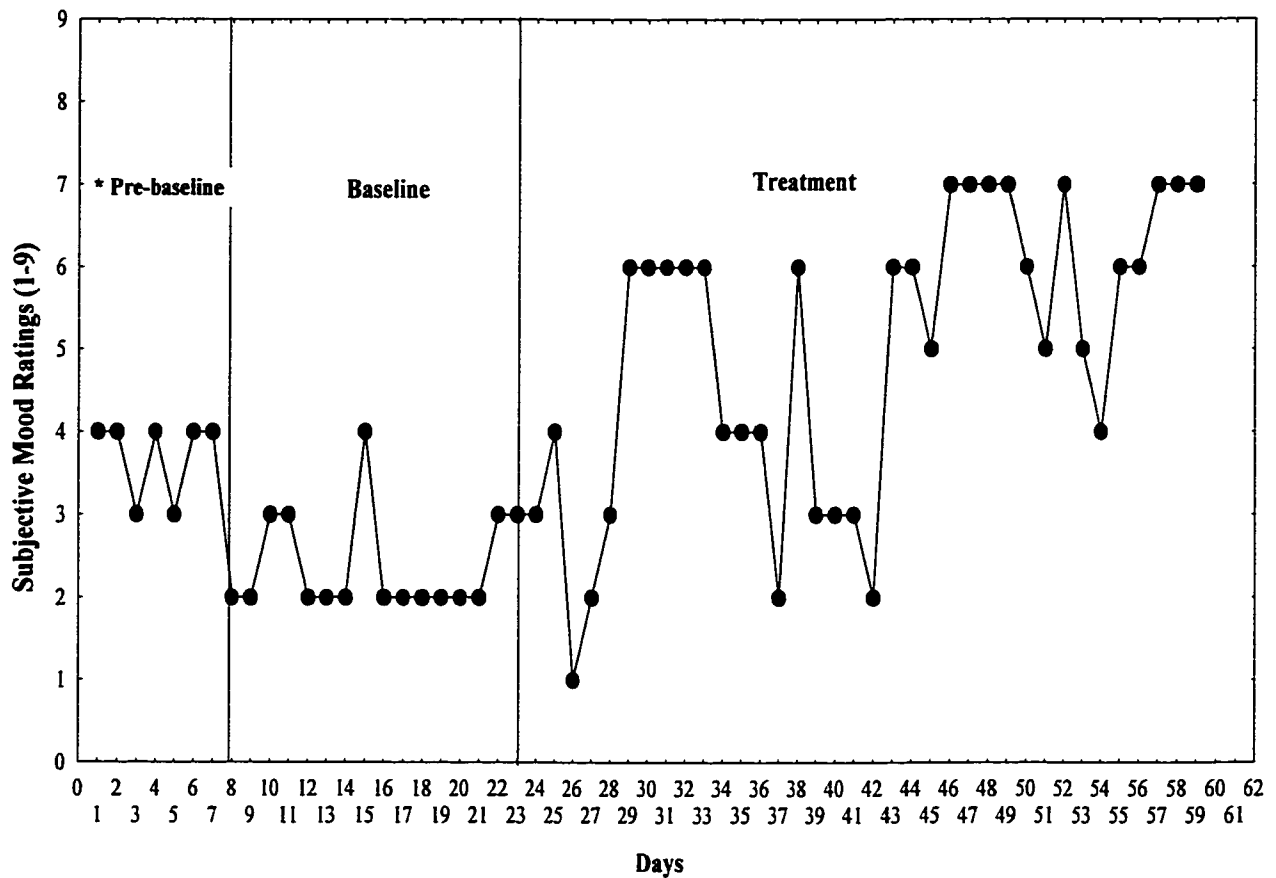


Figure 17. Daily mood ratings as a function of baseline and treatment periods. Extreme Sadness =1; Always Sad =2; Often Sad =3; Some Sadness =4; Neutral =5; Fair =6; Good =7; Very Good =8; and Great Mood =9. High scores indicate better mood.

* Data presented at pre-baseline were collected by the VON before the commencement of the baseline period.

Table 12

The Percent Agreement, Pearson's R, and Kappa Values for Session by Session Inter-Rater Reliability of the HRSD

	Percent Agreement	Pearson's R	Kappa
Session 2	81.25	0.87	0.70**
Session 3	81.25	0.85	0.70**
Session 4	81.25	0.49	0.49*
Session 5	81.25	0.87	0.71**
Session 6	93.75	0.78	0.76**
Session 7	81.25	0.44	0.33
<i>Overall</i>	82.29	0.84	0.68**

* $p < .05$

** $p < .001$

Results: Evaluating Functional Capacity

The following multiple aspects of functional capacity were assessed at pre- and post-treatment, and at a three months follow up: health status, mobility, activities of daily living and instrumental activities of daily living, mental functioning and communication, and social functioning and activity level. The findings are presented sequentially by category of functional capacity at the three assessment points for ease of comparison. Qualitative data from the OARS and SMAF are incorporated under appropriate headings. A summary of pre- and post-treatment and follow-up SMAF scores are shown in table 13.

Health Status

Pre-treatment. Mr. R's OARS pre-treatment assessment indicated that he had visited his doctor approximately 10 times in the past six months. He mentioned feeling so fatigued that he was unable to carry out any activities. Mr. R had severe arthritis, severe asthma, high blood pressure, poor circulation, anemia, and on-going heart problems that require a pacemaker. He rated his general health as poor, especially in the last five years, and felt that he could never again be active because of his physical problems. His health was rated on the OARS as moderately-severely physically impaired.

Post-treatment. According to the OARS assessment at post-treatment, Mr. R's health status had not changed. However, he reported making attempts to overcome his pain and remain active (e.g., not letting arthritis interfere with his planned activities). He rated his general health as fair.

Follow-up. There were no reported changes at follow-up in Mr. R's health status, and he rated his general health as fair.

Table 13
Scores for the SMAF Assessment at Pre- and Post-treatment,
and at the 3-Month Follow-up

	Pre-treatment	Post-treatment	3-Month Follow-up
Mobility	-5/-18	-3.5/-18	-2.5/-18
ADLs	-4/-21	-5/-21	0/-21
Instrumental ADLs	-13/-21	-13/-21	-13/-21
Mental Functioning	-3/-15	-1/-15	-1/-15
Communication	0/-9	0/-9	0/-9

Total scores on each category of functioning are determined by the level of disability. Items in the respective category have 4 classifications of disability: complete autonomy (0); requires supervision (-1); requires help (-2), and total dependence (-3). Higher total scores indicate more serious disability in each category and 0 indicates no impairment

Mobility

Pre-treatment. At the pre-treatment assessment, Mr. R's ambulation was laborious. He used a walker occasionally and a cane frequently. He had difficulty walking around the house and often sat for long periods. He reported sometimes walking in the lobby of his apartment building, to get exercise. However, he had great difficulty negotiating stairs. At the time of the assessment, he reported no longer driving and did not leave his house unless transportation had been arranged.

Post-treatment. Mr. R's ambulation outdoors remained somewhat laborious at post-treatment, although he proudly reported doing much more walking, including trips on foot to the corner store. He continued, however, to have difficulty negotiating stairs and tried to avoid places that did not provide elevator or escalator facilities. He reported that he was getting his car ready to drive in the near future, in order to improve his ability to travel independently.

Follow-up. Mr. R reported, at follow-up, that although walking remained physically demanding, he did so both outdoors and indoors using his cane. He continued to walk to close destinations in the neighbourhood, enjoying this activity as a form of exercise.

Activities of Daily Living and Instrumental Activities of Daily Living

Pre-treatment. Mr. R's pre-treatment SMAF indicated that he needed help carrying out most of his activities of daily living. He had no appetite, but would eat with encouragement. He required help washing and dressing. At the time of this interview, Mr.

R did not participate in any household chores, laundry, shopping, or meal preparation.

Mr. R's OARS indicated that he had moderately-impaired ADL capacity.

Post-treatment. Mr. R's post-treatment SMAF indicated that he needs some help carrying out some activities of daily living. He required less help washing and dressing.

He reported taking his own bath. His appetite had improved since pre-treatment.

However, Mr. R's participation in the instrumental activities of daily living remained rare. He did not prepare meals, shop, do laundry, or perform household chores.

Follow-up. Mr. R's follow-up SMAF report indicated that his ability to perform ADLs is, by and large, intact. He no longer required help with washing or dressing, and ate without encouragement. His instrumental ADLs (i.e., shopping, house chores, laundry), however, remained impaired.

Mental Functioning and Communication

Pre-treatment. Mr. R's score on the 3MS was 82/100 (and a derived score of 27/30 on MMSE). His orientation and comprehension appeared intact. However, he had some difficulty with memory items and his ability to abstract, as indicated by Similarities section of the 3MS was impaired. He appeared cognitively present during the interview and was able to express himself without difficulty. He reported believing that oxygen deprivation during his cardiac arrest may have caused permanent cognitive damage. Mr. R was emotionally labile during the interview and was reported to be extremely irritable by his wife. Mr. R reported some problems with his eyes, but a small trial showed that he was able to read the intervention material, as well as the local newspaper. He felt his

hearing was fine. Mr. R stated that he has his own power of attorney and makes his own financial decisions.

Post-treatment. According to the SMAF at post-treatment, Mr. R's mental functioning appeared intact, with the exception of self-reported difficulty with memory. He also mentioned thinking that his concentration had improved since the pre-treatment assessment, although his memory for little things is still a problem. He described feeling less anxious and irritable with his wife and children. His judgment and behaviour appeared normal. Mr. R continued to maintain his own power of attorney and to make his own financial decisions.

Follow-up. Mr. R reported, at follow-up, that his memory was poor with respect to some details, but that he was generally able to concentrate well. He no longer felt anxious or irritable, with rare exceptions. His judgment and behaviour appeared normal.

Social functioning and Activity Level.

Pre-treatment. Mr. R reported that before his depression began, he had had a full social life. He has nine children and several grandchildren who visit him on regular basis. He reported they visit much less since his depression. However, his pre-treatment OARS assessment indicated good social resources and fairly satisfying relationships with significant others who are willing to provide him with support. He estimated engaging in about 12 pleasant activities per week. Table 14 represents Mr. R's activity level as it has progressed throughout the treatment period.

Post-treatment. Mr. R reported that his social life had improved greatly since pre-treatment, and that he saw many people socially, especially family. He also reported

taking a position at his son's construction business and spending time there socializing and answering the telephone. He reported that being satisfied with his social life and level of activities (see table 14).

Follow-up. Mr. R reported at follow-up that he remained satisfied with his level of activity. He found activity level difficult to estimate, as he had been at his son's cottage for most of the summer and generally enjoyed relaxing. However, he mentioned engaging in "at least three or four nice things per day" – that is, around 20 activities per week. Figure 18 illustrates the time relationship between mood indices and activity level.

Table 14
Summary of the Number of Pleasant Activities Per Week

Baseline (before treatment started)	Estimated at around 11 activities per week
Week One of Treatment	15
Week Two of Treatment	14
Week Three of Treatment	12
Week Four of Treatment	17
Week 5 and 6 (combined Treatment)	19
Follow-up	Estimated around 20 per week

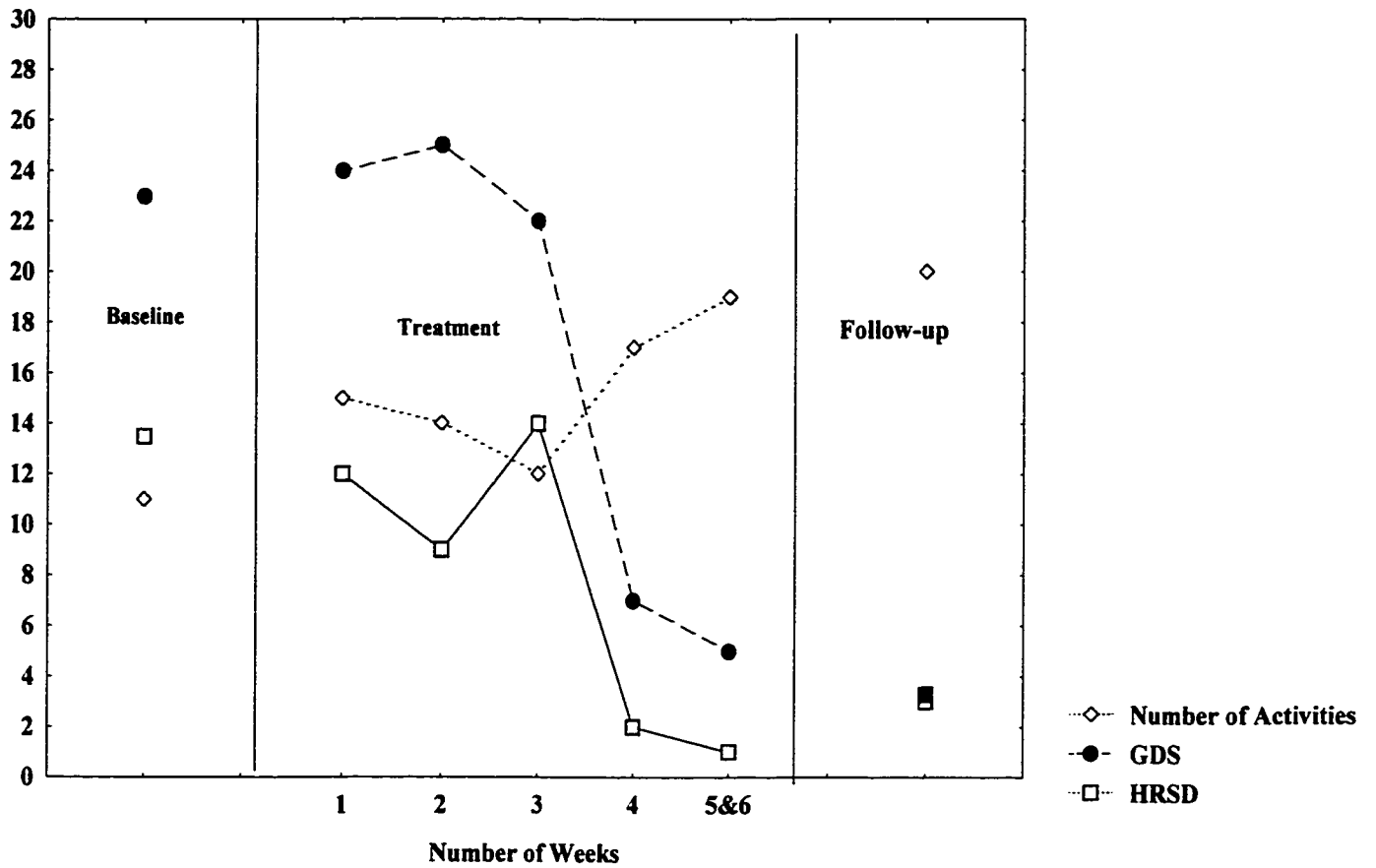


Figure 18. The level of activity plotted as a function of the treatment course and at follow-up, superimposed on mood indices for the same time periods.

Summary and Discussion for Case 6

Mood evaluation indicated that Mr. R had a positive response to treatment. His symptoms, which were of moderate severity, had remitted at post-treatment assessment. Mr. R's gains were retained and reflected in his 3-month follow-up assessment. This was corroborated by his own report of high morale and a satisfying level of activity (see table 14 and figure 18).

Mr. R made substantial progress throughout treatment (see figures 15, 16, 17, and 18). Moreover, these gains had not eroded at the 3-month follow-up. However, it also notable that Mr. R's responses to treatment were not immediate and showed a longer latency period than expected. His symptoms remained largely unchanged for the first few weeks after the introduction of treatment. With the exception of the subjective mood ratings, which showed a slow trend toward improvement after the first session (see figure 17), improvement in other indices did not appear until the last two weeks of treatment. Interestingly, Mr. R's activity level showed major increases in the last two week as well. Mr. R's mood symptoms, although fluctuating, showed a close time relationship with his increase in activity level. Figure 18 shows the time-synchronized scores for mood indices and activity level, indicating that a high level of pleasant activity corresponds to mood improvements. Three months after the end of treatment, Mr. R's follow-up assessment indicated that he was free of symptoms and was highly motivated to keep up his activity level, which he estimated had increased since the end of treatment.

Mr. R's level of functional capacity also showed improvements at post-treatment assessment in the following three areas: mobility, activities of daily living, and mental

functioning. Mr. R reported in his pre-treatment assessment being unable to walk outdoors because of his heart condition and poor energy level. However, at post-treatment he mentioned being able to walk to the corner store. At follow-up, he reported that he remains able to go for short walks and does so as a form of exercise. He also reported some improvements in his ability to carry out activities of daily living. At post-treatment, Mr. R reported being able to take his own bath, which, at pre-treatment had required assistance from the VON nurse. He maintained these gains at follow-up and mentioned being able to dress and wash independently. However, Mr. R did not show similar improvements in carrying out instrumental activities of daily living. This probably was the result of the high level of support available to him from his spouse and his children, who tended to take over for him.

In the area of mental functioning, Mr. R also reported some improvements. He reported memory improvements at post-treatment and mentioned being less irritable in his relationship with others. At follow-up, he reported that his improvements in mood had had an impact on his memory and concentration, both also showing improvements.

In summary, Mr. R's improvements were multifaceted, but were perhaps most pronounced in terms of his mood. The effects were clear and maintained well over a three-month period.

Case 7Personal Information

Mr. J was interviewed in August. He is an 85-year-old married man. He has a son and a daughter from a previous marriage and no children in his current marriage. He grew up in Ottawa with his parents. He mentioned that his parents' marriage was troubled but that they did not separate. He described himself as having been a shy child and teenager. Mr. J described his first marriage as extremely unhappy. His first wife was diagnosed with manic depression and had a long history of hospitalization. He mentioned that she attempted suicide several times. Mr. J's first marriage of 30 years ended when his wife died of cancer. He then remarried and described his current relationship of 19 years as extremely happy and loving. He worked as a cartographer for the government and retired at age 57. However, he was contracted to teach several courses at a community college for three years following his retirement.

Psychiatric History

Mr. J has described several past bouts of depression. He reported that his first experience occurred in his early 50s, when he did not receive a promotion that he had expected. At that time, he felt that his opportunity to elevate his career had been lost. He did not receive treatment during his depression, but lost interest in his work. He made arrangements to retire several years later.

After the death of his first wife, Mr. J reported experiencing extended grief and guilt, as well as depression. This condition disappeared after his remarriage, but returned

about nine months ago, following a complicated situation with his mentally-ill daughter, who was recently hospitalized for psychological problems.

Results: Evaluating Depression

Depression at Pre-treatment

At the pre-treatment interview, Mr. J acknowledged being depressed for the last 10 months. He denied thoughts of suicide (although felt that he would like to die) and had no plans to harm himself. According to Mr. J's SCID interview, he fit a diagnosis of Major Depressive Disorder (296.32). Though he mentioned that his symptoms had extreme severity, they were rated as moderate according to the guided interviews. At pre-treatment assessment, his HRSD and GDS scores were 16 and 29, respectively.

Depression at Post-treatment

At the end of treatment, Mr. J's mood showed significant improvement. According to the SCID interview, his depression had partially remitted (296.35). His HRSD and GDS scores were 11 and 22. His GDS showed great fluctuation (ranging from 2 to 30) during treatment, but in general was lower during the treatment observation period than during baseline.

Depression at Follow-up

At the follow-up assessment, Mr. J reported no depressive symptoms. According to the SCID interview, his depression seemed to have remitted for about 2 months (296.36). His HRSD and GDS scores were 2 and 1, respectively, indicating normal affect.

Table 15
The HRSD and GDS scores for Mr. J

Initial Assessment Baseline	16	29	"I have been extremely depressed for the past 10 months. I think that I had a sad and difficult life and it is just beginning to come out now. When I feel down, I don't want to live. There is nothing to live for"
Baseline	20	30	"...had mostly bad days this week. I am feeling down and don't want leave bed. I cry a lot....VON stayed for a whole hour this week -- I am quite sick"
Baseline	23	30	VON: Appears very slowed down and seems to deteriorate. Mr. J: I am not doing well. Last few days have been bad. I spend a lot of time in bed -- I am not interested in anything.
After Session 1 Introducing Pleasant Activities	10	2	"I have done the reading and have been trying to feel better. Things make sense, I just have to convince myself to follow the advice. I had a few bad mornings, but other than that I am O.K.
After Session 2 Plan & increase pleasant activities	15	30	"I have been going for walks and thinking I should go to Florida this winter. I would be able to do more there. I feel better, but the new pill is making me sick...I have shaking in my hands and my wife had to feed me"
After Session 3 Dealing with negative thinking	4	30	"I still feel O.K. Sometimes I feel like I could go down but I am trying. Things are not bad this week. We went out a lot...it helps a lot. Whenever I start to go down or feel a bad day coming on, we go out and it helps a lot."
After Session 4 The thinking feeling link	9	5	"I am finding I am able to talk about my feelings with my wife. I could never do that before. I think I may have stuff bottled up inside. I am O.K., but side effects from the pill bring me down. I experience shaking of my hands and legs and agitation."
After Session 5 Information about depression	11	2	"I feel like my mind is clear. The pill is a bit of a problem. The side effects are unbearable. I am to see my physician later on this week. What I don't have these side effects, I am just fine."
After Session 6 Post Assessment How to maintain gains & reusing what you learned	11	22	"I am feeling good. I help around the house and go out on my own, without the walker...lots of going out. I am reading again, I have not done that for a year...." "VON: Mr. J is showing good progress and his mood had improved tremendously. We are taking steps to better regulate his medication"
3-month Follow-up	2	1	Mr. J reported that he has been free of anxiety, depression, and had stopped crying. He has been feeling well for about two months and is leaving for Florida later in the winter. He also reported sleeping well during the night. He mentioned that he had lots of energy and no longer required naps during the day.

Evaluation of Clinical Significance

According to cut-offs and normative data provided by Jacobson and Truax (1991), the mean HRSD score for the clinically symptomatic range is 22.03 ± 7.19 – that is, 68% of this population scores between 15 and 29 on the HRSD. A reliable change index (RCI) of 9 points is necessary for a clinically meaningful improvement ($RCI > 1.96$). Mr. J's average HRSD score for the pre-treatment period was 19.6, placing him in the clinically symptomatic population. His score at post-treatment was 11, a decrease of 8.6 points. This decrease closely approaches the 9 points required for clinically significant improvement. His score at a 3-month follow-up was 3, which reflects a clinically significant change from pre-treatment scores.

Visual Examination

Changes in mean. Figure 19 allows a visual comparison between baseline and treatment mean scores for the HRSD and GDS. The HRSD mean score at baseline was 19.6, compared to an average of 10 during the treatment period. This represented a drop of 9.6 in the mean HRSD score during treatment. Similarly, the mean GDS score was 29.6 at baseline and 15.2 at treatment, representing a drop of 14.5 during treatment.

Changes in Level and Latency. Figure 20 shows weekly scores of the HRSD and GDS. Data collected immediately after the introduction of treatment (i.e., after Session 1, pleasant activities) show a 13-point decrease in the HRSD (from 23 to 10) and a 28-point decrease in the GDS (from 30 to 2). This substantial change in level occurred without latency.

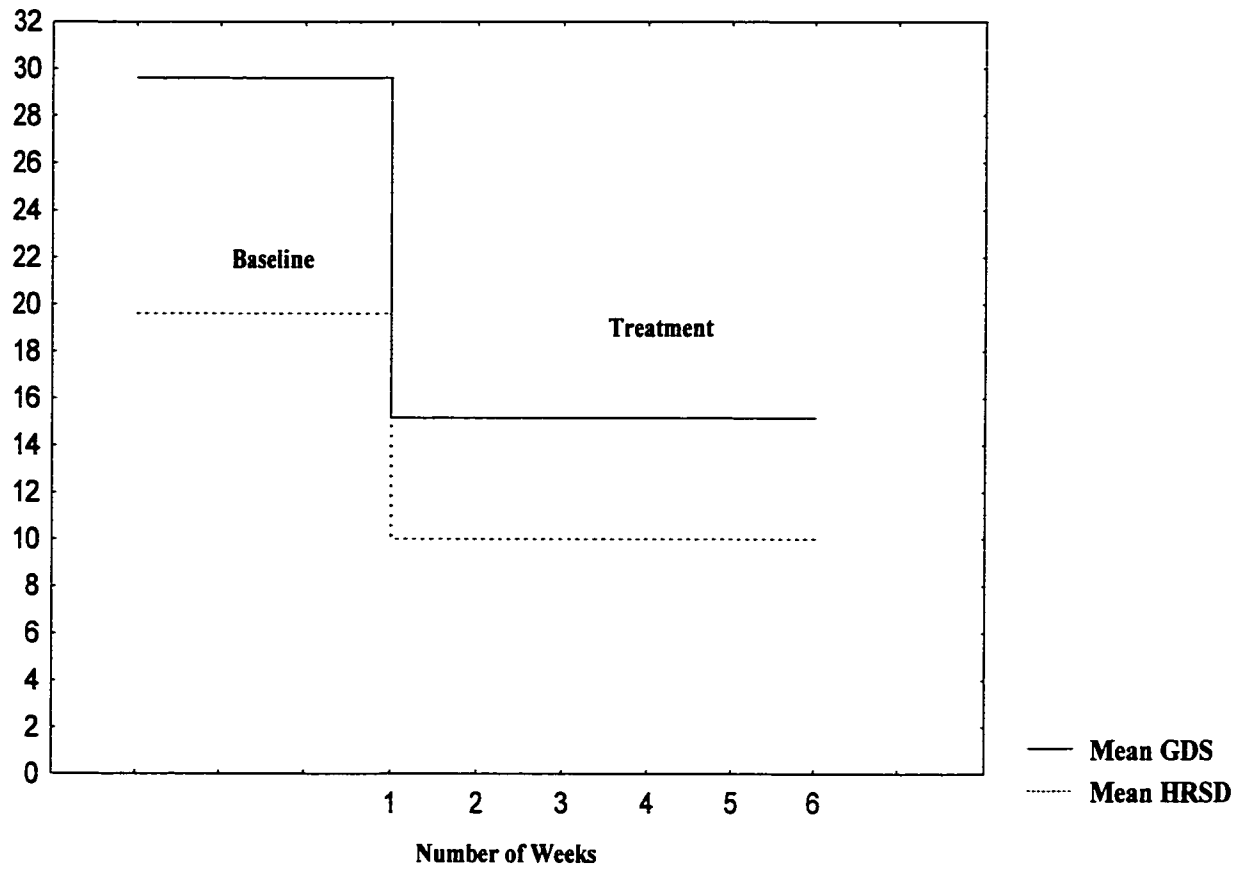


Figure 19. Changes in the mean score of HRSD and GDS over baseline and treatment period for Mr. J

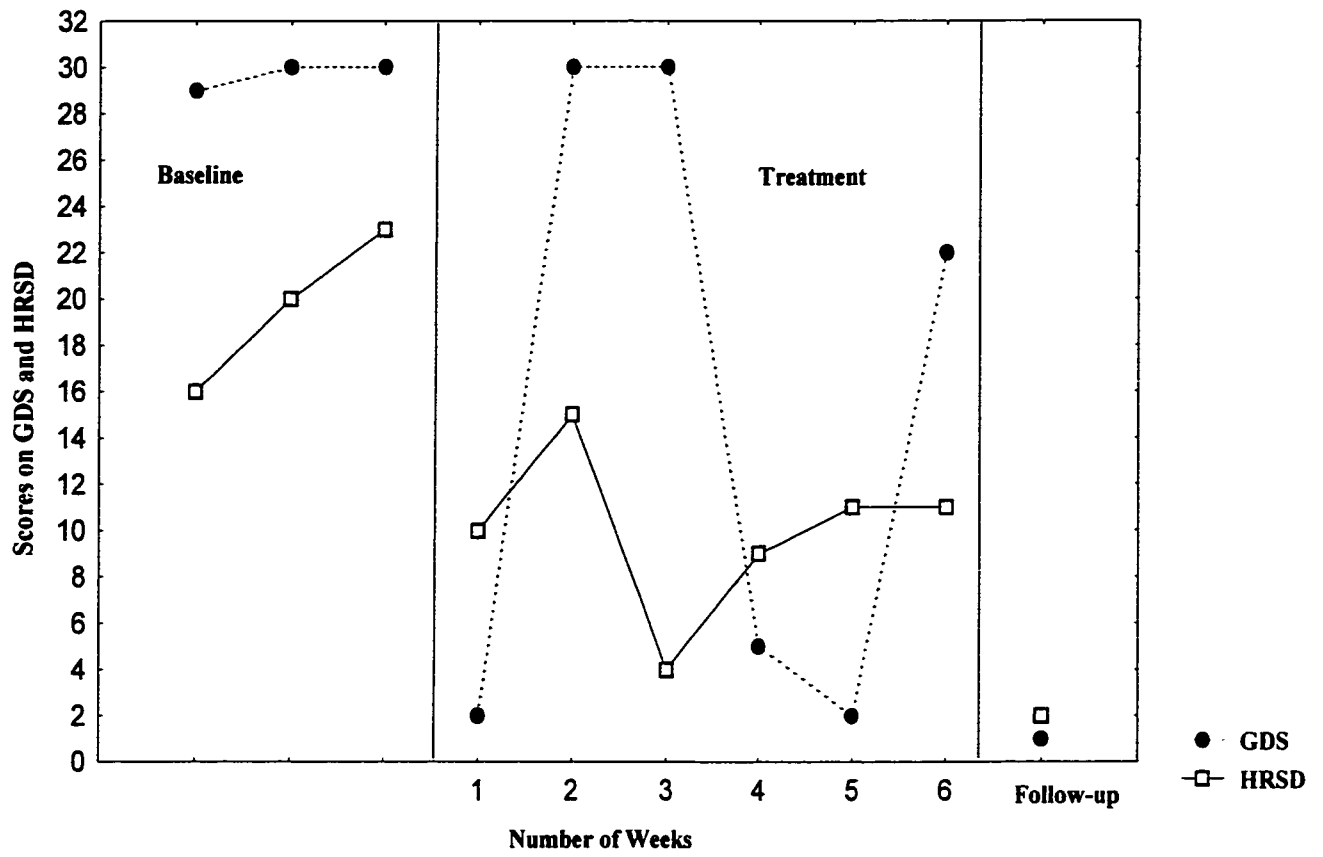


Figure 20. Scores for the HRSD and GDS for the baseline and treatment periods and at 3-month follow-up.

Subjective mood ratings. As can be seen from figure 21, Mr. J's subjective mood scores showed a great deal of fluctuation at the initial baseline period. However, his baseline stabilized at a rating of 1 (extreme sadness). He showed a large improvement in subjective mood rating directly after the introduction of treatment, and often rated his mood throughout the treatment as "fair," "good," or "very good."

Inter-rater Reliability

Recorded weekly assessments for the HRSD were scored in randomized order by an independent rater. Several indices were used to examine inter-rater reliability: session-by-session and overall percent agreement, Pearson's R, and unweighted Kappas. Table 16 presents these results. It is important to note that recordings started on the second session, in order to protect rapport (it was difficult to obtain participant agreement to record during the first interview). As can be seen from these results the two raters' percent agreement remained quite high and statistically significant for all sessions.

Table 16

Percent Agreement, Pearson's R, and Kappa Values
for Session-by-Session and Overall Inter-rater Reliability of the HRSD.

Session 2	87.50	0.94	0.82**
Session 3	87.50	0.95	0.83**
Session 4	56.25	0.82	0.41*
Session 5	93.75	0.88	0.89**
Session 6	68.75	0.68	0.54**
Session 7	100	1.00	1.00**
Session 9	75.00	0.85	0.56**
<i>Overall</i>	80.46	0.89	0.70**

* $p < .005$

** $p < .001$

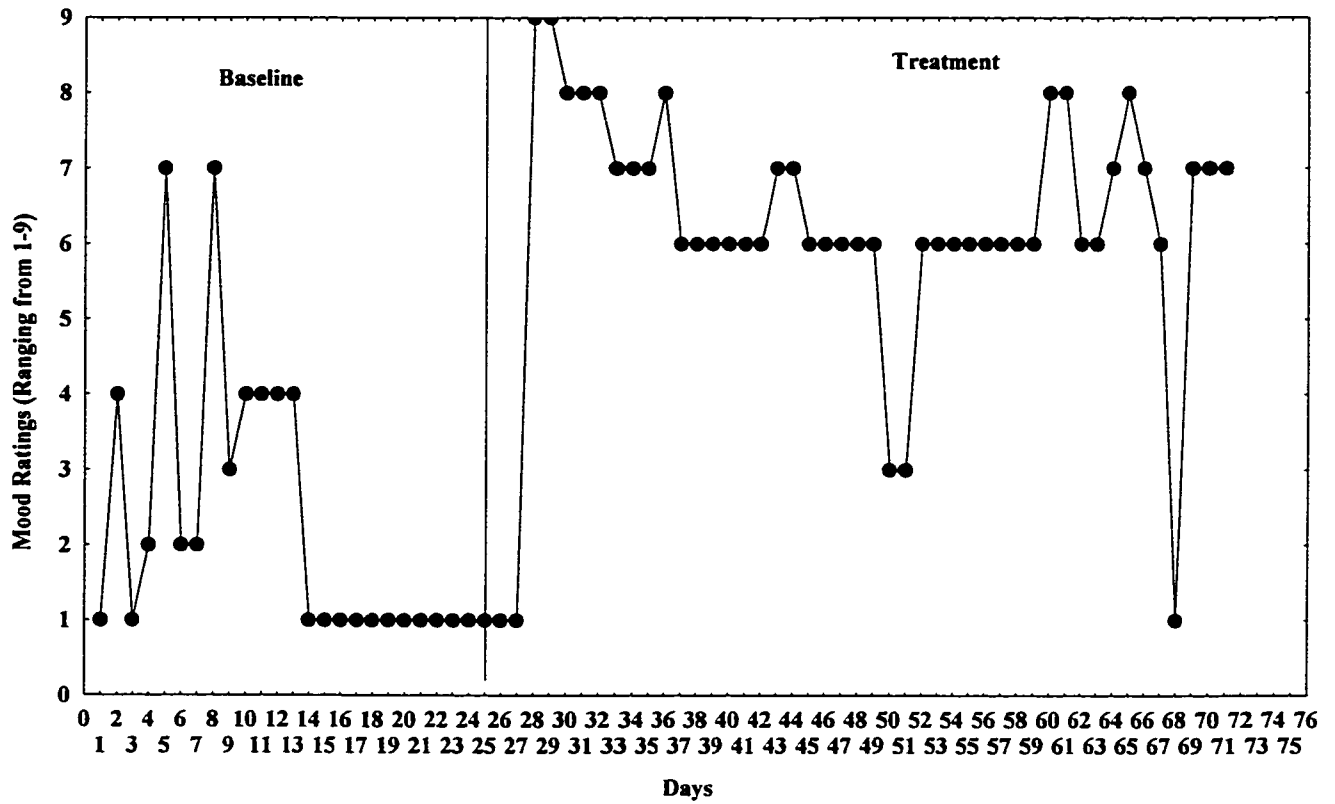


Figure 21. Daily mood ratings as a function of baseline and treatment periods. Extreme Sadness =1; Always Sad =2; Often Sad =3; Some Sadness =4; Neutral =5; Fair =6; Good =7; Very Good =8; and Great Mood =9. High scores indicate improved mood.

Results: Evaluating Functional Capacity

The following aspects of functional capacity were assessed at pre- and post-treatment, and at the 3-month follow-up: health status, mobility, activities of daily living and instrumental activities of daily living, mental functioning and communication, and social functioning and activity level. The findings are presented sequentially by category of functional capacity at the three assessment points for ease of comparison. Qualitative data from the OARS and SMAF are incorporated under appropriate headings. A summary of pre- and post-treatment and follow-up SMAF scores is shown in table 17.

Health Status

Pre-treatment. Mr. J's OARS pre-treatment assessment indicated that he had visited his doctor once a week for the past six months (24 times), but had not required hospitalization. Mr. J had been diagnosed with angina and severe arthritis, with associated pain. He had been diagnosed with cancer of the prostate about five years ago, but reported that this condition was now under control. Mr. J also suffered from poor circulation, which affected sensation in his legs. Mr. J's vision and hearing were in fair condition. He rated his health as "fair, for an 85 year old man." He mentioned some deterioration in his health in the past five years. He was rated on the OARS health summary as moderately physically impaired.

Post-treatment. The general state of Mr. J's health at post-treatment remained rather unchanged from pre-treatment. He reported that, during the past a few weeks, he suffered from pronounced shaking in his arms and legs. He attributed this to a recent change in medication. According to Mr. J's physician and VON nurse, Mr. J suffered

from toxicity caused by anti-depressant medication. At post-treatment, he rated his health as fair. He received an OARS summary rating of moderately-mildly physically impaired.

Follow-up. At follow-up assessment, Mr. J reported feeling well and stated that his toxic condition had been treated successfully. He was no longer taking anti-depressants. He continued to rate his health as fair. His OARS Health subscale summary scale indicated a moderate to mild physical impairment.

Mobility

Pre-treatment. At the pre-treatment assessment, Mr. J was ambulatory, but used a walker occasionally both inside his apartment and outdoors. He found that his arthritic condition combined with a low level of energy interfered with his mobility. At the time of the initial assessment, Mr. J reported that he no longer drove his car, and would only travel if driven by his wife.

Post-treatment. Mr. J reported some changes in his mobility compared with pre-treatment. He mentioned feeling well enough not to use his walker, although he would use it if going out. He also mentioned being able to go for a walk at least twice a week. He reported that his arthritis and at times low energy continued to interfere with his mobility. The results of his SMAF assessment for pre- and post-treatment, as well as follow-up are reported in table 17.

Follow-up. At follow-up, Mr. J reported that an improved level of energy allowed him to walk outdoors for long periods without problems. He also mentioned using his walker only on occasion, especially if he was experiencing arthritic pain.

Activities of Daily Living and Instrumental Activities of Daily Living

Pre-treatment. Mr. J's SMAF assessment at pre-treatment indicated that he was able to carry out his activities of daily living independently. However, in the category of instrumental activities of daily living, his SMAF profile indicated substantial impairment. Mr. J reported that his depression rendered him unable to help with domestic tasks, shopping, laundry, or meal preparation. Mr. J has his own power of attorney, but reported that he deferred financial decisions to his wife and step-daughter, as he feels that his judgment is affected by his mood.

Post-treatment. Mr. J's SMAF assessment at post-treatment indicated unimpaired functioning with respect to activities of daily living. Notwithstanding notable improvements in Mr. J's ability to perform instrumental activities of daily living, he continued to experience some impairment. Mr. J reported feeling well enough to help around the house (e.g., putting dishes in the dishwasher and preparing some of his own meals). He also reported recently making some decision with respect to finances.

Follow-up. At follow-up assessment, Mr. J showed no impairment in his activities of daily living, demonstrating no change since pre- and post-treatment assessments. However, he showed less impairment in his instrumental activities of daily living in comparison to post-treatment. As can be seen in table 17, his improvement first appeared at post-treatment and became stronger at follow-up. At follow-up, he mentioned being able to manage his own financial affairs and to help with household chores such as dishes, meal preparation, and laundry.

Mental Functioning and Communication

Pre-treatment. Mr. J scored 96/100 on the 3MS and had a derived score of 28/30 on the MMSE. His performance was quite strong, in general. During the initial interview, Mr. J was mentally present, although he appeared slow and had difficulty concentrating on the interview questions. At pre-treatment, Mr. J's SMAF interview indicated that he experienced some emotional lability. Mr. J's wife, who assisted with the initial interview, reported that he often stayed in bed all day, refusing to participate in any daily activities. Mr. J reported experiencing episodes of uncontrollable crying and was afraid that he might have outbursts of crying in public.

Post-treatment. Mr. J appeared much more alert at post-treatment. He reported feeling that his mind has "cleared." He also reported that he no longer had episodes of uncontrollable crying, and that he was no longer worried about emotional outbursts in public. He reported continuing to experience some negative affect in the mornings, but that this passes and that he is then able to have normal days.

Follow-up. At follow-up, Mr. J reported that he felt his mind was clear, although his memory was sometimes poor. His SMAF assessment indicated no impairment with respect to mental functioning or ability to communicate.

Table 17
Scores for the SMAF Assessment at Pre- and Post-Treatment,
and at the 3-Month Follow-up

Mobility	-2.5/-18	-1.5/-18	-1/-18
ADLs	0/-21	0/-21	0/-21
Instrumental ADLs	-13.5/-21	-11/-21	-7/-21
Mental Functioning	-2/-15	-1/-15	0/-15
Communication	0/-9	0/-9	0/-9

Social Functioning


Pretreatment. Mr. J lived with his wife and had regular visits from his step-children (at least once a week). He reported that his social life was quite rich before his depression. He and his wife had been active in their church and had many friends, both locally and in Florida, where they usually spend the winter. At the time of this assessment, Mr. J no longer attended church because of his fear of uncontrollable crying in public. Mr. J reported that he now isolated himself, refusing to take visitors and phone calls. He often stayed in bed all day. Although the OARS indicated that his social resources and level of support were high, his social functioning was rated as severely impaired. His level of activity throughout the treatment period is presented in table 18 and figure 22. Estimates of the level of activity for prior to treatment and at follow-up are also represented.

Post-treatment. Mr. J's social functioning exhibited much improvement at the end of treatment. He reported that he had been going out nearly every day, and enjoyed these outings and intended to continue. He also reported having gone out alone for walks. Mr. J's wife mentioned that they had been accepting some invitations to visit with old friends and had had people come to their apartment to visit. Mr. J and his wife had also renewed their plans to go to Florida for the winter.

Follow-up. At follow-up, Mr. J's social functioning remained unimpaired. In fact, he reported many activities and mentioned that he had been enjoying life. He provided an estimate of activity level that was comparable with that observed during treatment (see

table 18, figure 22). He left Canada shortly after this interview to spend the winter in Florida.

Table 18
Summary of the Number of Pleasant Activities Per Week

	
Baseline (before treatment started)	Estimated at 10 activities per week
Week One of Treatment	31
Week Two of Treatment	36
Week Three of Treatment	39
Week Four of Treatment	40
Week Five of Treatment	36
Week Six of Treatment	34
Follow-up	Estimated at 38 per week

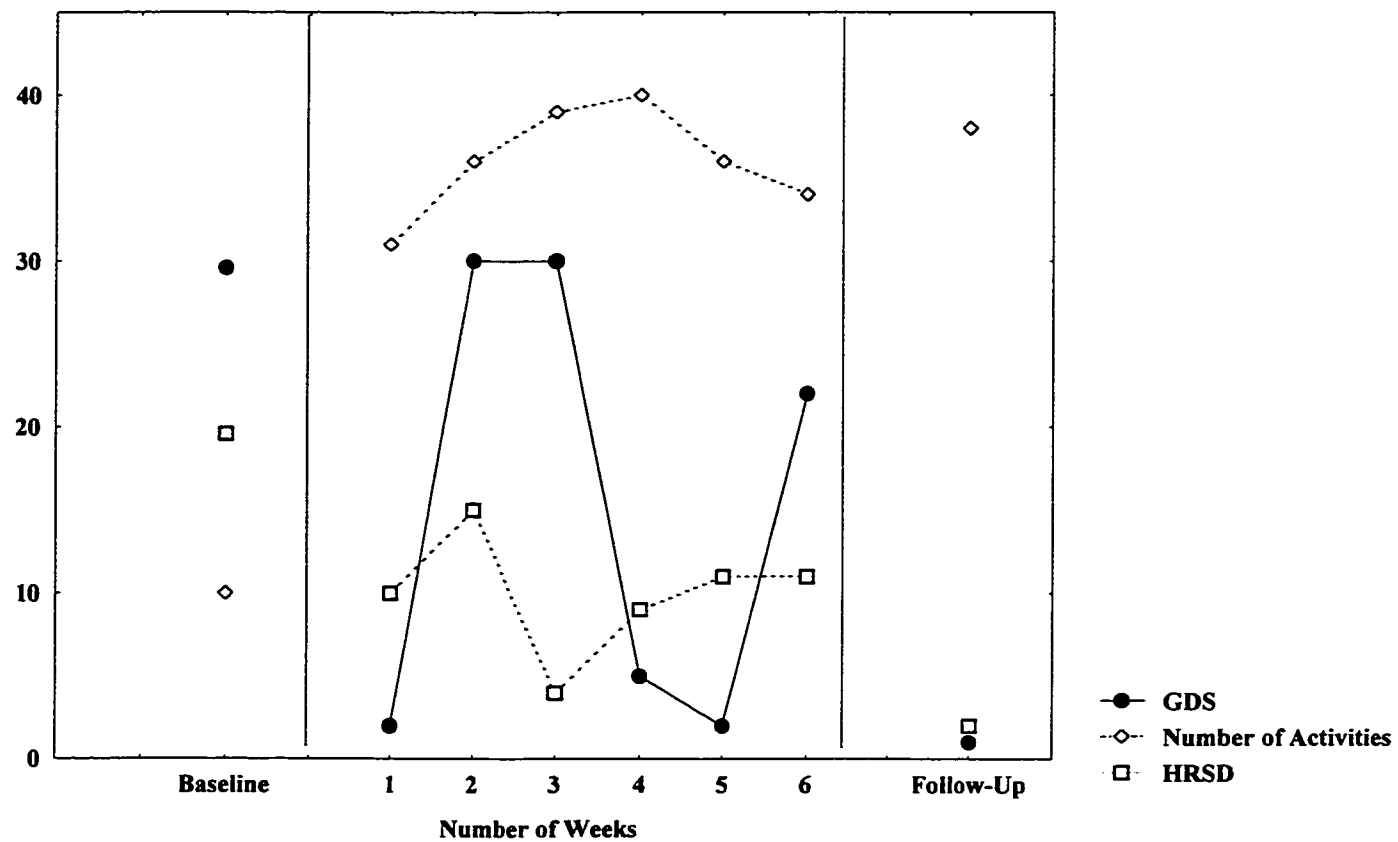


Figure 22. Level of activity plotted as a function of the treatment course and at follow-up, superimposed on mood indices for the same time periods. The GDS and HRSD at baseline were averaged across baseline for the ease of comparison

Summary and Discussion for Case 7

Mr. J showed abrupt improvements after the introduction of treatment. This improvement was apparent on all mood indices. For example, his HRSD dropped 13 points and his GDS dropped 28 points. Mr. J and his wife both believed that reinstating pleasant activities in his daily routine would help him overcome his depression. Fortunately, Mr. J had many social resources and many supportive significant others who encouraged this behavioural change. However, upon examining Mr. J's mood profile during the treatment period, it is apparent that he experienced large fluctuations in mood within short periods. Most of these fluctuations were, in fact, a response to physical setbacks which interfered with his preferred activities. For example, during Sessions 2 and 3, he experienced an increase in depressive symptoms as a result of physical symptoms secondary to anti-depressant medication. In his self-report, Mr. J mentioned feeling better, but struggling with the physical side effects of the medication, which often adversely affect his mood. Notwithstanding these obstacles, Mr. J's mood improvements were clinically meaningful and had a strong impact on his quality of life. At follow-up, his gains appeared even stronger. His mood was normal on all mood indices and he reported a high level of pleasant activity and hopefulness.

Mr. J's functional ability showed improvements in two areas: social functioning, instrumental activities of daily living. At post-treatment and at 3-month follow-up assessment, Mr. J reported being able to help with activities such as dishes and laundry. At pre-treatment, Mr. J had been highly impaired in this area and completely dependent on his wife. In addition, his social functioning, which had been severely impaired at pre-

treatment, had improved at post-treatment. He reported being highly active and mentioned such activities as going to church, shopping, visiting with friends and family, reading, listening to music, and working on writing a book of religious reflections.

General Discussion for Series C

This series was conducted as a replication of Series B, with several refinements. First, estimates of the level of pleasant activities were gathered at a baseline to provide a point of comparison for levels observed during the treatment period. Both participants estimated a low level of pleasant activities at baseline. The first participant, Mr. R, showed a gradual increase in activity level, with a notable increase in Session 4. This gradual increase in activity level also corresponded to a gradual improvement in mood. Mr. R experienced a lag that was similar for both mood improvement and activity level. This pattern of results is easier to interpret in the context of Mr. R's report to the VON nurse (see table 11). While he seemed to agree with the idea of reinstating pleasant activities, he did not feel that he was able to alter his own life. He, however, appeared to test the idea slowly, making small steps (e.g., taking his own bath) and then increasing his efforts as he saw the positive effects on his mood. In contrast, Mr. J and his wife became quite convinced of the efficacy of reinstating pleasant activity and devoted a great deal of effort to bringing about a change. Mr. J experienced no latency in his response to treatment, as both his pleasant activities increased and his mood symptoms decreased immediately after the introduction of treatment. For each of these participants, the implementation of pleasant activities and mood improvements occur closely together in time. This provides further support for our findings in series B.

DISCUSSION

This study was undertaken to meet a pressing need of community older adults who suffer from functional impairment and depression. The combination of depression and disability creates a deteriorating spiral for an already under-reached group. Although this special population presents with high risk for depression, the solutions are scarce. This, in part, is due to challenges of service delivery. This work was directed by the desire to create a solution that would be therapeutically efficacious and deliverable at low cost, would require minimal involvement of mental health care professionals, and would be acceptable and usable by the older person.

We integrated all of these aims into a new service-delivery model. First, we chose a behavioural treatment on the basis of its demonstrated efficaciousness and suitability to older persons. The problem-solving approach of this modality was ideal for allowing the older person to create custom-tailored behavioural change to cope with specific disability. Second, the treatment was delivered in a simple written form -- bibliotherapy, with examples relevant to the life and issues of the older person. This manner of administration allowed participants to do the work of their own therapy: that is, to think about and develop their own behavioural adjustment and then carry out the change. This placed the control with the individual. Third, the issue of delivery was handled by finding a connection with a community-based service, the Victorian Order of Nurses, an organization that has a unique relationship with this high-risk population. The VON were suited for delivering this type of treatment with very low financial and time costs. As this intervention was designed for self-administration with minimal contact, we aimed to

express a clear therapeutic philosophy that was easily understood both by the nurses and the participants. The VON were the delivery medium for this intervention and served as a guide and a resource for participants. Fourth, this mode of delivery was not likely to carry the usual stigma associated with seeking mental health care, and was embedded in the already-existing rapport between the VON nurses and their clients.

Though the idea of using community-based resources to deliver treatment to under-reached populations has been suggested by many, the application requires the coordination of numerous contingencies. This was the purpose of our work.

As the ideas for this investigation became increasingly defined and the purpose more clear, it also became evident that a more focused approach was necessary to answer questions related to the implementation and efficacy of a new community-based intervention model. The model was tested in three series. The purpose of the first series was, by and large, exploratory. Indeed, prior to setting larger and more complex plans in motion, some questions regarding the workability of this model required answers.

First, and perhaps most importantly, the soundness of the model was dependent on the extent to which it could be implemented successfully using community resources. In other words, was it feasible to incorporate this model into the VON services, which are independent and already in place? Second, although behavioural interventions (and in particular Lewinsohn's model, see Scogin et al., 1987; 1989) have been demonstrated to be effective in alleviating depression in older persons, this investigation intended to apply a behavioural treatment that was modified for a unique group of older persons: those with health problems and disability. Given the complex nature of this population and the

multidimensionality of their problems, the efficacy of a new model required re-examination. More simply, the fundamental questions pertained to the efficacy of a short-term, simplified course of written material, and its effectiveness.

A third, and perhaps a more auxiliary set of questions concerned functional capacity: that is, can the intervention also introduce enough of a life change in participants to influence their ability to function in their daily lives? It was also interesting to explore the areas of functioning that were most responsive to treatment. Although we hypothesized that improvements in mood might have a positive effect on functional capacity, this part of the investigation was exploratory in nature.

The data collected in Series A answered some of our questions and generated a few more. The model was successful at the fundamental level: that is, it was feasible to coordinate the program with VON visits and to commission the nurses with program delivery. Having settled these issues of workability, the efficacy of the new model was also examined. Although producing clinically significant improvements in the participants' level of depression, it was not clear which components of the intervention were most useful. Participants experienced some delay before reductions in mood symptoms were observed, with most improvements occurring near the last two to three weeks of the intervention. Further, functional capacity showed little change. In retrospect, this did not seem surprising since most serious disability is likely to remain stable, especially over a period of six weeks. However, on observation, it was apparent that when improvements in functional capacity did occur, it was mostly in the area of social functioning and, in some cases, in performing activities of daily living.

Clearly, it was necessary to make modifications in order to answer these new questions and optimize outcome. Questionnaires assessing the social functioning and the social resources aspect of functional capacity were introduced to the initial assessment and became part of the participants' outcome profile (i.e., post-treatment outcome and follow-up). This modification allowed us to become more sensitive to changes in areas of functioning that were associated with the intervention.

In addition, the order of sessions was altered, so that the apparently more effective ingredients of the intervention, in this case hypothesized to be pleasant activities, were introduced immediately after interruption of baseline. Based on our observations from Series B, we were expecting a short latency, or none at all. We also introduced continuous monitoring of pleasant activities to the observation period as an index of implementation (or a compliance check).

Results produced in Series B were favourable. Both participants experienced a clinically meaningful reduction in mood symptoms, retaining most of these changes up to three months after the end of treatment. Perhaps the most interesting finding was the absence of a latency period -- that is, delays in improvement after the introduction of treatment to baseline behaviours. We found it remarkable that such substantial changes could occur so rapidly. Nevertheless, reports from the VON and occasionally from significant others corroborated this change and named the increase in client participation in pleasant activities as the catalyst of change. Also, graphical representation of the data indicated that mood and level of activity seemed to vary together. That is, when

participants reported higher levels of depression, they also reported declined activity level.

Our data provide strong evidence that pleasant activities were the active ingredient in this intervention. To verify this would involve collecting baseline data on pleasant activities. However, there would be a problem with this approach. If pleasant activities had been monitored at baseline, it is possible that participants would have become sensitized to the issue and would have embarked on a process of self-change, before treatment had begun. This situation would be impossible to control and attempts to do so might even be ethically questionable. In this manner, baseline measures would have been contaminated with treatment effects. Consequently, a decision was made to launch a third and final series in order to address some of these issues. We attempted to resolve the issue of pleasant activity by obtaining a point estimate at the initial interview with participants. Although an estimate, it may be used as a point of comparison between pre- and post-treatment activity levels. Also, we introduced a second blind rater in order to ensure reliability of the findings. The final series served to replicate what we felt was an acceptable final form of the intervention. Our results remained quite positive with strong response to treatment. However, we were not able to consistently replicate the absence of latency in both participants. One participant in the series showed mood improvements immediately after the introduction of the intervention; however the second participant experienced a latency of several weeks. On closer examination, however we found that even for this second participant, improvements in mood remained in close temporal correspondence with increases in activity levels.

From Series B and C, we found that some participants were eager to reinstate pleasant activities into their lives and proceeded to take immediate actions. Others, however, required a longer time to make the changes (and perhaps needed more encouragement from the VON). It is possible that individual differences in initiative and enthusiasm may affect how quickly participants make the behavioural changes. Also, functional capacity could be important to the ability of participants to approach the task of scheduling pleasant activities. More specifically, delays in implementation may occur as a result of low functional capacity. The participant who showed delayed response in Series C had poor health and a high level of functional impairment. It is possible that participants who are particularly frail or impaired may find it more difficult to develop compensatory behavioural skills. Notwithstanding the delay observed in this participant, once he began increasing his level of pleasant activities, his mood also improved. In contrast, both participants in Series B had moderate functional impairment. These two participants did not show a delay in implementing pleasant activities and, at the same time, exhibited remarkable improvements in mood.

Whatever the motivational state of the participants, or whatever their interactional process with nurses, reinstating pleasant activities and changes in mood appeared together in time. There is evidence that implementation of pleasant activities was essential for improvement. Mood improvement was contingent on the actual increase of pleasant activity level, and not simply reading about it or monitoring it. This is true of both Series B and C. Mood changes and increase in activity level appeared together, with or without delay. The delay may simply represent the time it takes for this behavioural change to

occur. Delays in implementation may be related to complicated disability condition, lack of motivation, and/or lack of resources.

Questions regarding adherence to treatment are not new. In this case, activity level was advocated and coached by the reading material and monitored by the nurses. However, in the interest of independent self-administration, the program did not declare the participant or the nurse responsible for implementation. There are many issues that may effect the inclination to change. First, we capitalized on some of the inherent qualities of behavioural intervention. The behavioural formula of change is simple but powerful. In our case much work was done to ensure face validity, and simple presentation of bibliotherapy material was maintained. This issue is particularly pertinent when working with older adults. Acceptability of treatment and ultimately implementation is facilitated, if proposed changes are reasonable, attainable, and mindful of the limitations of older persons. In addition, the delivery of this intervention was in the context of a medical care model, which contributed to its believability and apparent credibility. While this does not preclude other non-medical community interventions, it is a generational preference that must be understood and accepted as a possible factor in treatment success.

It is important to note that while the data strongly suggest that pleasant activities are an important component of the treatment, the idea of reinstating pleasant activities was supported by sessions that focused on the participants' cognitions. For example, after the pleasant activity sessions were under way, participants were required to read material on the feeling-thinking link, and dealing with irrational and negative thinking.

This material was also taken from Control Your Depression (Lewinsohn et al., 1986) and is not at odds with behavioural treatment. In fact, understanding the link between thinking and feeling, as well as coping with negative thinking may assist participants in maintaining their gains after the termination of treatment. Older persons with functional impairment may find it difficult to keep up the effort of deliberately participating in pleasant activities. This is less likely to occur if participants understand that much of their recovery was dependent on their ability to take initiative and combat negative thoughts with continuous effort. Maintaining therapeutic gains is an important issue for any intervention. Most participants in this study maintained their gains well. In fact, many continued to improve during the three months following treatment and showed further gains at follow-up. For example, Mr. J had some residual symptoms at post-treatment, but was completely free of symptoms at follow-up. Many reported reading the material over again to refresh their memory and some continued to use the exercises included in the treatment package.

Like any community project, we had our share of obstacles at many levels. There are a few that are worthy of note and will be discussed here. Many of these issues are connected to research demands and the resulting pressures placed on program participants and nurses, whereas others are related to participant characteristics.

Research Issues

First, research control made this intervention a much more demanding task than it needed to be, had it been implemented widely by the VON and other community agencies. Participants in the program had to agree to commit to a series of assessment

interviews. These interviews were necessary to collect data regarding subject suitability (inclusion/exclusion criteria), mood status, health status, activity level, coping style, functional ability, mental status, and available social resources. This complete profile allowed us to understand the medium in which the program operated and helped us interpret our results. In addition, weekly assessments were necessary in order to ascertain change over time; an important feature of multiple baseline procedures. Further, clients monitored and provided the nurses with activity reports, as well as completed daily and weekly mood measures. Also, comprehensive interviews were done at the end of treatment and at follow-up. The nurses completed a compliance check and time diaries for administrative purposes. This constituted a great deal of work for both clients and nurses that was not directly connected with the clients' condition. There needed to be a substantial time commitment, as well as a financial commitment from the VON administration to pay for the nurses' time spend on the intervention.

Unfortunately, some potential participants referred by the VON declined participation due to these pressures. Three clients, though good candidates for the program, felt that they did not have the energy to keep up with the research demands of the intervention, especially the weekly assessments. During the course of the final series (Series C), participants found the weekly audio-recording of the structured interview (HRSD) quite stressful. However, in order to observe the standards of rigorous method in the multiple baseline format, it was necessary to gather comprehensive information regarding participants' pre-treatment status, continue to gather information throughout the

intervention, repeat assessments at the end of treatment, and conduct a follow-up. There was little flexibility available without compromising good procedure.

Some exceptions were made. For example, Mr. R (Series C) requested an early termination to his treatment (by one week), as he felt that his mood symptoms had disappeared and wanted to leave town on vacation with his family. Given that the final session was geared towards how to maintain gains, and that he was free of depression, it was difficult to impede his distinct progress, which perhaps is the strongest evidence of our success. Mr. R was given a combined session five and six. He remained well at follow-up.

Notwithstanding the program's limitation in format and administration by restrictive research demands, it is designed for wide application. One of the strongest features of this intervention is that it is flexible and sensitive to individual consideration. That is, it can be tailored to fit the needs of any given VON client. For example, since all six sessions are relatively self-contained, there is freedom to concentrate (spend more time with the nurse or alone) on readings that appear more relevant to the problem behaviour. Some participants did this naturally. For example, Mr. A (Series A) found the session on negative thinking quite helpful and continued to read it in conjunction with other sessions. Certainly, if the VON were administering this program without the restrictions placed by research control, they would have the flexibility to allow clients to choose helpful components, and perhaps drop some that appear superfluous. Further, some parts of the program can be left to self-administration and others can be discussed with the VON nurses, depending on each client's needs and resources. Frequently,

participants needed assistance in problem solving in order to facilitate pleasant activities. For example, Mr. Y (Series B) wanted to plan activities that were quite a distance from his home and found it difficult to use public transportation. The VON nurse, quite familiar with community resources, was able to arrange special transportation in an adapted vehicle for Mr. Y. This service allowed him to extend his functional mobility and arrange pleasant activities and meeting at locations of his choice.

In the same vein, modifications can also take place while the intervention is in progress. For example, participants may terminate early, if their depressive symptoms have disappeared and the essential parts of the program have been covered, in particular sessions on pleasant activities and negative thinking. Also, since sessions are only several pages in length, sessions can be combined in a coherent way for participants who desire a more a rapid pace. These modifications are only recommended in cases where there is a reasonable justification to vary the tested model (i.e., participants' requests or special circumstances). It is, however, recommended that the intervention initially be presented to clients in the form finalized and examined in the final series of our research (Series C).

As mentioned previously, the flexibility of this intervention is highly advantageous, especially with respect to older adults with health problems. Some of the unforeseen events taking place during the treatment course were health condition complications and medication irregularities. In three cases, such disruption occurred during the treatment period. Ms. S (Series B) became ill and was hospitalized for several weeks, an event which caused quite a serious setback in terms of her mood. Mr. Y

(Series B) began to anticipate a major relocation, which to him meant that he would have to abandon all of the social and community contacts that he had worked hard to create. This participant had difficulty coping with this situation and it had an impact on some of his progress during the observation period. Also, Mr. J (Series C), although stable on medication at initial interview, had a sudden change in medication causing serious side effects which contributed to agitation and negative mood. Alas, results must be interpreted in the context of these unforeseen events, which may be a problem for a short observation period. However, future research must anticipate these irregularities, as their absence is difficult to imagine in an older person with unstable health. It must be kept in mind that the core goals of the intervention are, or should be considered to be independent of these fluctuations. That is, the intervention can continue and work itself around these events or resume when the client is ready. This is a judgment that very much depends on the individual's situation and the nature of the life event.

Client Characteristics

Older adults are naturally a heterogeneous group because of having had lived a relatively long time and having had a chance for diverse experiences. It is important that the intervention is not presented in ignorance of any given client's liabilities and resources. This is not a weakness of the VON, since they know their clients well, both medically and personally. Notwithstanding, during the administration of the program, particular client characteristics became important and, we speculate, may in future application affect outcome. Some of the issues that we will discuss here are social resources, financial resources, and functional ability status, and suitability.

First, it quickly became apparent from both client and nurse reports that, when improvements in functional capacity occurred, they were most manifest in the area of social functioning. However, potential for improvements most likely depends on the social resources available. In the case of Mr. R and Mr. J (participants in Series C), there were many social resources available -- friends, family, and a supportive significant other. Both of these participants had withdrawn from their social contacts because of their depression. The resolution for this problem, and ultimately for their depression, was not complicated. Scheduling pleasant activities naturally involved the intentional renewal of the social aspects of their lives. For these clients, embracing the notion of pleasant activities was quite rewarding. They received support and encouragement from family and friends, support which was awaiting their initiative.

It was much more difficult for other clients. Mr. Y (Series B), for example, had moved to Ottawa from St. John's and was cut off by distance rather permanently from his social contacts. There was much work done in consultation with the VON to find suitable replacements to his activities in St. John's. The VON assisted him in finding community centres in the area, arranging transportation, and reinstating his connections with Veterans' Affairs. He was highly determined to follow treatment recommendations and was, consequently, quite successful in finding social compensation. It is, however, clear that some clients, depending on what is available to them, would require more concrete assistance, as for some the battle is more than simple initiative.

Second, participants also differed in terms of their financial situation. Naturally, financial freedom has a strong impact on the range of pleasant activities that can be

planned. Some clients, for example, might like to go to Florida for the winter, but cannot afford it. Mr. A (Series A) was able to reinstate some of his pleasant activities; however, because of his limited pension, he could not afford membership in some of the more costly recreational facilities. There is little that the nurses can offer to rectify such situations directly. However, there is always a way to compensate. The VON helped Mr. A gain membership in a local community centre that fit well with his needs and had moderate fees. Although it is important to be aware of clients abilities to “purchase” pleasant activities, we believe that if this issue is treated with care, it would not have a major impact on outcome. At the risk of conjuring up an old cliché, most pleasant activities chosen by our participants were not expensive. For example, pleasant activities included such things as time with family and friends, knitting, reading, listening to music, praying, talking on the phone, watching television, attending church, cooking, going for walks, going for drives, etc.. Of course, some of our clients did go to Florida (Mr. J, Ms. S, Ms. R), which is an expensive, but likely pleasurable, venture. Undoubtedly, pleasant activities are strongly mediated by personal preference and resources, but ultimately, there can be many pleasant activities that do not require travel and expense.

Third, our data indicate that functional capacity is also an important determinant in the range of possible pleasant activities. At the assessment interview, participants frequently reported a low level of activity and many empty and tedious days. Some of them also reported that this situation was largely created by their inability to perform physically and fatigue. Behavioural intervention cannot remove permanent physical disability, or convince participants who experience pain that they do not. However, the

intervention worked with some of these individuals indirectly. For example, Mr. R began to increase his activity level markedly, despite his initial reports of total incapacity. He explained his improvements in terms of increases in his energy level, which were likely a result of mood improvements. However, he still evinced relatively high levels of functional incapacity (i.e., his ADLs improved slightly and IADLs remained rather impaired). Given Mr. R's health history and current condition, this is likely to be a permanent situation for him. While the intervention cannot, and is not designed to change the functional capacity of participants, it is possible for us to state the program at least removed the added exacerbation of mood symptoms.

Fourth, the issue of suitability is important to any intervention. We set some exclusion criteria for recruiting participants, based the literature and clinical experience. For example, we excluded subjects with thought disorder, bipolar disorders, and alcoholism. Many of these disorders are associated with depression. However, successful treatment would require a very different focus from that offered by this intervention. Other significant suitability issues are mental presence, and some short-term geographical stability. Participants were screened for serious cognitive impairment. It is possible that, with modification, a similar program would benefit depressed older persons with cognitive impairment. However, it was our estimation that serving a cognitively-impaired population would entail a different approach, perhaps one that allows more direct prompting and that is less geared towards self-help.

Most of those agreeing to participate in the program remained geographically stable during the six weeks of treatment. However, many community older persons

anticipate and go through many relocations. Several potential participants were unable to take part because of relocation to long-term care, which ended their contact with the VON. Mr. Y relocated shortly after follow-up in order to be with his son. The issue is not relocation per se, although it is quite a stressful life event, but rather that some continuous contact with the VON was necessary to proceed with the intervention. Ultimately, there is no reason to believe that such a program could not be carried out by long-term care facilities or in other locations, where services similar to those offered by the VON are available to older persons with functional impairment.

Limitations and Future Directions

Many of the potential limitations to this work have already been discussed under the caption of research issues. As mentioned, unforeseen events, relocation, and sudden deterioration in health were occasional impediments to gathering and interpreting the data. However, this likely to be a normal state of affairs in the life of an older person with health problems and disability. Perhaps what we have observed is, after all, not error variance or background noise, but the very reality of this group. It may be that future research has to resign itself to accounting for these elements and incorporating them into the outcome profile. That is, depression in old age cannot be intelligently treated without special attention to late-life trials and limitations. Treatment success is possible; but careful consideration is a necessary condition for efficacy.

As mentioned previously, this research was designed as a minimal-contact model of intervention. Because, however, of the necessity of continuous mood assessments, clients were seen once a week for about an hour of interviewing. Although, these sessions

were restricted to assessment, it is possible that some participants derived some therapeutic benefits from this attention. Nevertheless, this was clearly not the case for all participants -- both Mr. R and Mr. J (series C), as their mood improved, expressed a desire to end the assessments and, consequently, contact with the researcher.

The VON's natural role with their clientele supports older persons' efforts to reintegrate themselves in the community after long illnesses and disability. Compensatory strategies, such as reinstating pleasant activities, which have a strong impact on mood, fit well with the VON's mandate and mission goals. It is necessary for us to make clear that although, by and large, this intervention was self-administered, it is not likely that it would operate well without the support of an involved community agency. Indeed, this intervention was reworked for the purpose of administration by community agencies with access to otherwise under-served populations.

Having established feasibility and suitability of the model, it would be of benefit to develop and test other modifications that can be attached to community services. Future work may consider similar behavioural treatment for cognitively-impaired older persons, administration by a significant other or main care-giver, and older persons in extended-care facilities. Further, as has been suggested by researchers (Scogin, 1997), advanced technology -- for example, the internet, interactive CD-ROM, television, and educational tapes -- can offer an additional medium to disseminate such programs. Also, materials designed to increase awareness of the consequences of functional impairment and its connection to depression in older persons can be made available in various settings (e.g., primary care settings, community centres, religious institutions, etc.).

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Appendix A

Information Sheet for Potential Participants

Information Sheet

Psychologists and researchers interested in older individuals have been working in order to establish a treatment to help seniors who are feeling down or sad. Their research has been fruitful and in many cases they have been able to help people improve their spirits.

This program is designed to help individuals who suffer from depression or low mood. We are a research group (made up of a professor and a doctoral student at the University of Ottawa, and professionals from the Victorian Order of Nurses) who are especially interested in people over the age of 60. We are asking elders, who may be interested, to take part in the study. The treatment is offered free of any charges and is a part of ongoing research at the University and at the VON. If you would be interested, at first, we would like to make an appointment to visit you at home and ask you some questions about your health and how you have been feeling. This interview will be given by Ms. Guirguis (doctoral student), under the supervision of Dr. P. Cappeliez.

The treatment might be offered either right away or after a delay period ranging from 2-4 weeks. This treatment provides some reading materials that have been found to be helpful in the past. The reading that is given for the purpose of treatment are taken from a book called Control Your Depression. This treatment was written by Dr. Peter Lewinsohn and his colleagues, who are experienced psychologists working in the area of depression. Dr. Lewinsohn worked with people who felt depressed and wrote the book based on his experience and research.

The treatment will last for eight weeks. During this time the VON nurses will be spending some extra time with you every week in order to answer questions or explain parts of the book which may be unclear. The treatment can only work if the material is read, so if you choose to participate we will ask you to try and do your best reading the material every week. We would like to find out about your progress and help you out as much as we can. For this reason, the nurses might be asking you how well you are doing and if you were able to read the material assigned for the week. An interview will be given by Ms. Guirguis at the end of therapy. Several interviews might be scheduled afterwards for the purposes of follow up on your progress after the treatment program is over. We will contact you at 3 month after treatment is over and arrange for a meeting at your home, when convenient.

People working on the project have put together a consent form or, in other words, a formal agreement for participating in the project. We would like you to read it very carefully and ask as many questions about it as you feel necessary before you sign it. It contains some important additional information.

Appendix B
Consent Form

Consent Form

I, _____ am interested in taking part in a study on self-administered therapy conducted by Ms. Guirguis, doctoral student, under the supervision of Dr. P. Cappeliez, Professor at the school of Psychology of the University of Ottawa. The purpose of the study is to help us develop programs that would allow people to independently manage their own moods.

I understand that treatment will start after a waiting period ranging from 2-4 weeks. The program will be delivered in the form of reading material. I understand that my participation in the study will consist of reading the material, as well as completing the related exercises and activities suggested in the readings. Some extra time will be scheduled each week with the VON nurses in order to discuss or clarify the readings (20 minutes). Those sessions are likely to take place once a week for a period of 6 weeks. In addition, there are 2 interviews before the program begins (about 2 hours each), as well as an end of therapy assessment (2 hours). I also understand that some questionnaires will be given on weekly basis and through out the treatment course of 6 weeks. As a follow-up to the study I understand that I may be contacted for additional interviews, 3 months, after the treatment is over. All interviews will take place at my home and by appointment.

I understand that I am free to withdraw my participation at any time and without obligations. Although, it would be better that I answer all of the questions, I may refuse to answer any question(s).

I understand that during my readings or discussion with the nurses negative issues might be brought up, which might cause me to become upset. I understand that the researchers and nurses will attempt, whenever possible, to deal with these feelings when they occur.

I understand that all information collected from me in session or in assessment, will be kept confidential.

Finally, I have read both the information and consent sheets and my questions have been answered in a satisfactory manner.

There are two identical copies of this consent form, one for my own records and the other to be retained by the researchers.

Questions may be addressed to Dr. Cappeliez (562-5800 ext. 4806) or Manal Guirguis (562-5800 ext. 4472).

PARTICIPANT'S SIGNATURE: _____

DATE: _____

RESEARCHER'S SIGNATURE: _____

Appendix C

Intervention Guide Written for the VON Nurses.

Instructional Guide for Monitoring Self-Administered Treatment for Older Adults

Introduction

The purpose of this guide is to provide instructions for monitoring various aspects of the self-administered treatment offered to the VON clients who suffer from depression.

By and large, the intervention (reading material) is based on the work done by Lewinsohn and his colleagues (Lewinsohn, Munoz, Youngren, and Zeiss, 1978, 1986, 1992). More specifically, the content of the intervention utilized in this work is borrowed from the book Control Your Depression. In its original form the book contained 14 chapters, however, for the purpose of this work the content has been reorganized for administration over an six week period (treatment duration), i.e., six stages.

Lewinsohn and his colleagues place emphasis on the functional relationship between the individual and his/her environment. That is, the task of identifying reasons for depression necessarily focuses on the environment (rather than intrapsychic phenomena), and the goals targeted for intervention are concretely related to the person's everyday surroundings.

The Intermediate and Ultimate Goals of the Intervention

On a general level, this treatment aims to help the older person adapt to the stress by creating a more accommodating environment. Lewinsohn and his colleagues specified a number of therapeutic milestones which must be attained for the treatment to succeed.

These steps are as follows:

1. Older adults need to learn how to examine their daily lives, paying special attention to the relationship between behaviour and mood. For example, particular events may

consistently precede or follow feelings of depression. In part, defining the affect-behaviour relationship can help the older person pinpoint the problem and set goals for change. This initial phase might be especially difficult for older adults who are severely depressed. In this case, soliciting the help of significant others or of the intervention team might aid the process.

2. The second phase of this treatment focuses on acquiring skills to increase pleasant activities or minimize the impact of unpleasant ones. An important aspect of this phase is selecting behaviours which can actually be changed and are under the control of the older adult. For example, realities such as physical illness or lowered income cannot be altered easily but a depressive response to these circumstances can be changed.

Alternatives include constructive activities which may alleviate some of the impact of negative life conditions. This phase may entail a great deal of trial and error, but once these activities are built and incorporated into the routine of the older person positive changes will follow.

3. The third phase of this treatment emphasizes self-initiative. That is, for example evaluating the effectiveness of the new changes and modifying the goals if necessary, set new goals for change, create self contracts and implement reward systems in order to augment motivation. This phase tends to be difficult and may require a great deal of practice and repetition of the purpose of the intervention and its basic assumptions.

4. And finally, the ultimate goal of this treatment is to create a durable philosophy and a generalizable model of the world that the client can retain and use in various contexts.

The Intervention Team

The intervention team (i.e., researchers & VON nurses) perform a highly critical role in facilitating the treatment and dealing with hurdles that arise during the process.

The relationship between this team and the individual client should be a collaborative and supportive one.

The Role of the Intervention Team

In addition to monitoring the treatment program, the intervention staff play a pivotal role the therapeutic progress of the client and in helping clients overcome specific obstacles to treatment. Lewinsohn and colleagues speak on several important points in this regard. First, some clients have difficulty pinpointing the initial goals for treatment. In this case, the VON personnel should constantly remind the client that problems must be modifiable and under his/her control. Clients should be discouraged from focusing on what is being "done to them" and attending to what they are doing. Furthermore, in the initial stages of the treatment the intervention personnel may have to work on eradicating beliefs about intrapsychic stable states (e.g., I have always been this way and always will be) and redirect effort towards concertizing the problem and emphasizing the role of skills in creating change. At the onset of treatment, the most important goal is to obtain a strong level of commitment from the client. Clients should be encouraged to feel that therapy is a priority and that it is the first step to regaining control over one's life.

Second, initial goals must be relatively small, manageable and have a virtual guarantee of success. Goals that are too complex or too ambitious can set up the client for failure and inevitably reinforce their sense of inadequacy, conversely success is self-perpetuating and moralizing. This is particularly important in maintaining clients'

motivation and faith in the treatment, and encouraging work on successively more difficult problems.

Third, clients should be encouraged to engage in contracts with themselves. For example, breaking a difficult task into several more tolerable hurdles and then using self-reward at the point of accomplishing each of the smaller tasks. While this may appear silly to some older adults, the intervention staff should encourage it and invite the client to "at least try it", with the reminder that many things appear silly but they work nonetheless.

Fourth, this work is being done with clients who have medical conditions which may have directly or indirectly influenced their mood and may in addition have an impact on treatment. Behavioural treatment can be effective in alleviating the disheartening effects of losing certain abilities (e.g., client can no longer jog everyday or drive a car) by focusing on the remaining abilities and resources.

Fifth, Lewinsohn and colleagues emphasized self-reliance as a central component in the treatment. That is, clients should not be dependent on the nurses for seeing them reinforcement, but find ways to obtain reinforcement from their own environments. It should be made clear that the role of the VON staff and the research team is limited to guiding and clarifying the intervention. For example, VON staff involved with a given client may help clients understand parts of the written material by helping them rephrase treatment principles and occasional role play.

Sixth, Lewinsohn warns that natural deference to older persons may often lead to accepting the client's negative evaluation of his or her ability to change. It is important that VON personnel assisting the client during the intervention do not become visibly

discouraged. This would hinder the client's ability to persist. An optimal way of dealing with negative life events is to accept what cannot change (bereavement, financial loss), but maintain behavioural optimism: There are aspects of life that can be enjoyed.

Finally, some of these points may have to be reiterated to clients throughout the course of treatment. Also, the message should be concertized by using examples from the client's life and continually demonstrating the applicability of therapeutic principles.

Appendix D

Session-by-Session Content of the Intervention Program

Session One

Everyone has times of feeling sad or blue. People will sometimes say “I am depressed or down”. Sometimes these feelings can last longer than usual and interfere with your life and it might take a little bit of work to get back on track.

Sometimes it is natural to feel sad because of dramatic event or an important loss, such as the death of a loved one. No matter how difficult the situation is we people are meant to recover. For some of us it takes longer to get over losses. If sadness last for a long time something must be done about it.

WHAT IS NOT DEPRESSION?

First, being sad or depressed does NOT mean you are crazy. It is a common problem and many people experience intense sadness at some point in their lives. It is a part of life, but it could become serious and getting some education on how to deal with it is a good idea.

WHAT IS DEPRESSION?

Depression may show up in different ways in depending on the person. Let us tell you how some people experience and express their sadness:

Low Level of Activity:

People tend to be less active. Sometimes people who are feeling down sit around all day and do nothing or just watch TV and nap. The things that were done with ease are now much harder to do. For example, things that used to come naturally like doing house work or reading the news paper suddenly become hard work.

Feeling Down:

People who are depressed usually feel very sad, blue, hopeless, useless, and down much of the time. They may see life as meaningless and are likely to be gloomy and pessimistic about the future. Like it was mentioned before, people vary in how they express these feelings. Some people look unhappy much of the time and cry very easily. Others manage to put up a good front much of the time, but inside they feel just as sad.

Feeling Worthless:

Sometimes when people are depressed they may feel like they have failed at many important things in their lives (for example, family life, job, money). They are likely harder on themselves than other people would be. Their spouses and close others may see them in a different kinder way. The point is, these feelings are a product of the person being overly critical of themselves and everything he or she does.

Guilt:

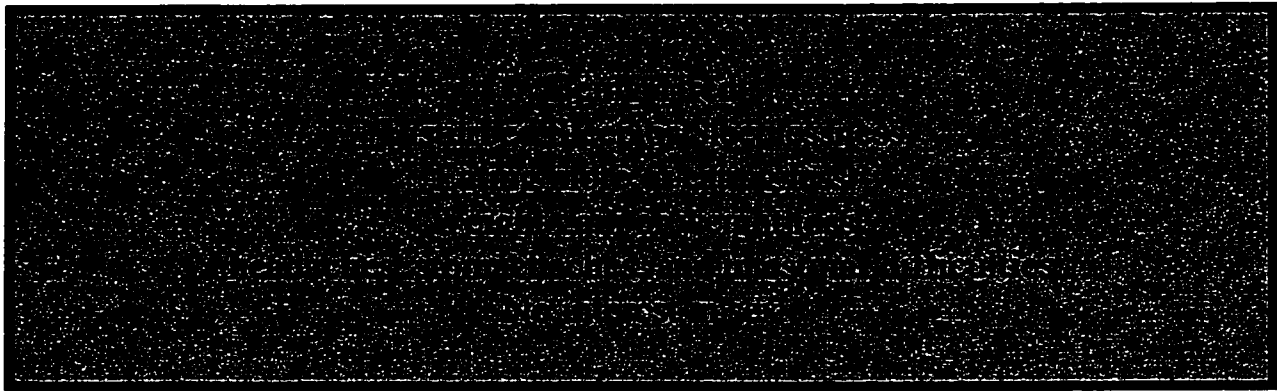
Some depressed persons express feelings of guilt and feel as if they deserve to be punished. Guilt leads people to blame themselves for many things, including being depressed.

Problems Concentrating:

When people suffer from blues they often have trouble concentrating. Even things like keeping track of a movie or an article in the news paper become tough tasks. Sometimes this shows up in being unable to make simple decision, for example, dinner or how to plan your day.

Physical Problems:

For some people, ***having the blues may show up as physical and health problems.*** Let us list some examples here, but they may NOT be the same for everyone:



Congratulations!!!! You have taken the first step to improve things. Keep up the good work. This is the end of this session, if you would like more information about any of these points, please let the VON worker or Manal Guirguis know, we can provide you with more readings or discuss it with you.

Session Two

Human beings have thought about themselves for a long time. We all really want to know how our mind works and what makes other people tick. It has been a complicated task, because we are all different from each other. Even brothers and sisters are really different from each other, and sons and daughters are different from their own parents. But we call keep asking questions about ourselves because we would like to be able to have more of a say in how we feel and what we do. We would like to be able to influence others to be more cooperative and friendly with us.

Some people believe that everything we do is the result of what we have learned. Let us give you some examples. Everyone has a favourite food and that depends on what we learned to like: some people love snails others think they are disgusting. So many important things in our lives are learnt. The way we talk, walk, and the way we *think* also. Just as we learn how to do certain things, we learn to think in certain ways.

And we learn certain ways of *feeling*. We learn to feel sentimental about certain things: Places that remind us of happy times in our lives, places that remind us of sad times, people we learned to include in our lives and love like friends, and we learn to run our lives in a certain ways that become set. Some individuals learn to act, think, and feel in a pessimistic or blue way. But people can change because we can always learn new ways to handle our lives no matter how difficult things are. Let us tell you a little bit about how our feelings and behaviours are influenced by things that go-on around us.

WHAT INFLUENCES THE WAY WE FEEL?

Thoughts:

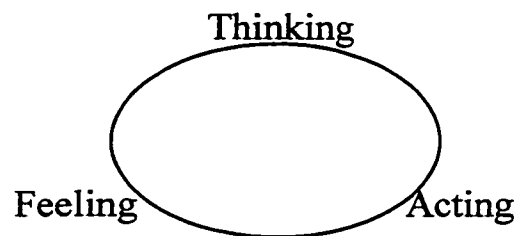
Our expectations, beliefs, and other thoughts can influence the way we feel. For example, if a person expects to have a bad time at get-together, he or

she probably will. Thoughts can set the stage for feeling down or unhappy. But thoughts also have the power to make us happy again.

Actions:

Our own actions influence how we feel. For example, if you were to sit around and do nothing for days, you would soon feel bored and down. Another example would be trying to relax. Trying to relax muscles is a simple action that makes people feel so much better.

THE WHOLE STORY is the way we feel also influences the way we ACT and THINK. Thinking acting and feeling all influence one another directly and with lots of force. You can think of it as the acting, thinking, feeling circle:



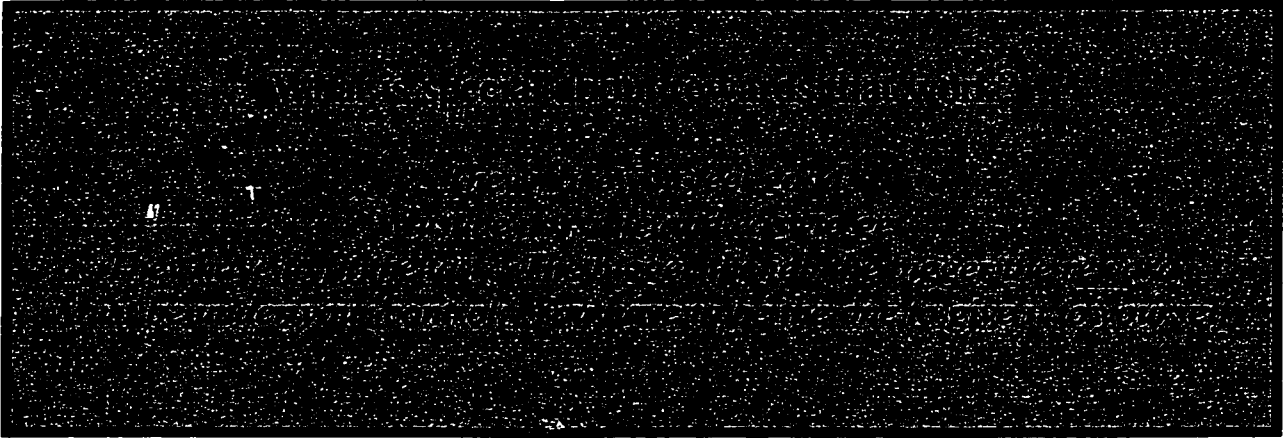
If this topic interests you we have more detailed readings. Please let us know if you would like to know more about it.

Changes are a normal part of life. Sometimes we can make changes deliberately in order improve our lives. This can be hard and requires some work, but the results are wonderful and even surprising to many people. There are some ways that make it easier for us to make positive changes happen. Let us go through some of them.

Rewards:

Contracting means to make an agreement or a contract with yourself. For example, you could contract with yourself to work on a task that you have been putting off. The other part of contracting is the reward. Like any contract when the work is done there is a pay off. Rewards could be anything you enjoy or love, for example, books or magazines, clothes, and

foods. Rewards can be something that you enjoy but don't have time for, for example, taking a relaxing bath, talking on the phone, and even "wasting time".



Great accomplishment. You finished your second session. We hope you feel like you have done something to change some of the things you don't like. We think that you having come so far is a wonderful positive step.

Session Three



YES! The little things that we enjoy make our happiness. When positive activities are absent from our day, it is natural that we feel a bit down. When these things are absent for a long time we may feel sad, down, and even helpless. Let us talk about making changes and putting the things you enjoy back in your life.

We would like you to tell us what you like. We are attaching a form where you can list all things that you enjoy doing. But remember, these things must be realistic and possible. We are hoping that listing these pleasant activities will be enjoyable for you. Do it with someone else if you like.

Keeping track of pleasant activities:

I am sure you are wondering how to go about keeping track of your pleasant activities and if there is enough of them. Well, we use our schedule forms to that. We will give this to you to hang on your fridge or keep on your desk.

Across from each activity, there is a row of little boxes number 1 to 30, these are the days of the month. We are hoping that you will keep track of your pleasant activities by checking how many of them you have done over a month.

<u>Activity</u>	<u>Day of the Month</u>						
	1	2	3	4	5	6	etc.
Golf	√						
visiting		√			√	√	
TV	√	√	√	√		√	

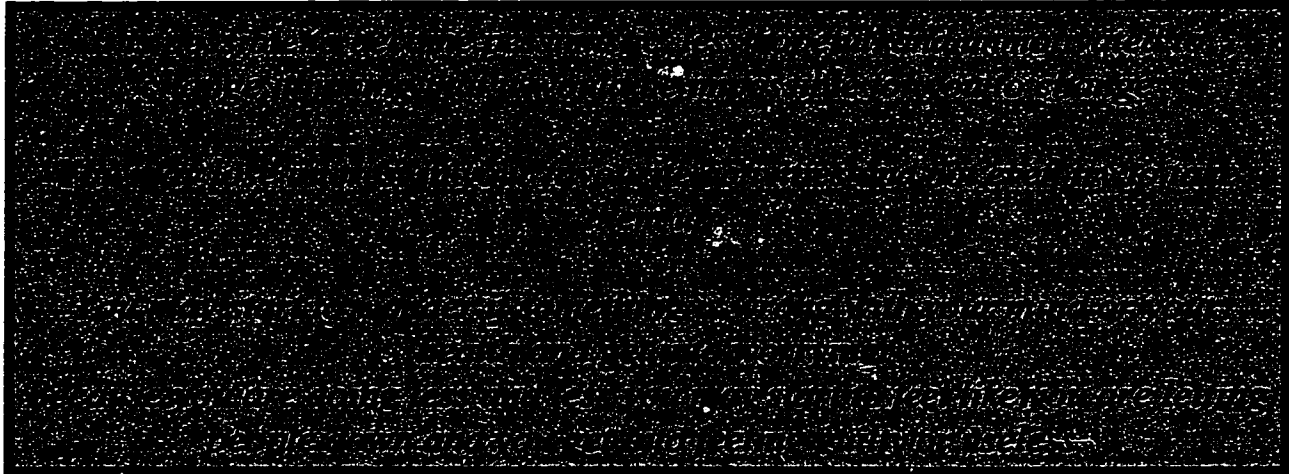
These are some of Mrs. Henderson's favourite activities: Golf, TV, and visiting with friends and relatives. She used our sheets to keep track of them during the month of January. For example on January 1st, she went golfing and then watched TV. She checked both activities under the 1 (for the first). On the 2nd of January she watched some TV and visited with friends, on the third she just watched TV. Keeping track of her pleasant activities, Mrs. Smith discovered that on the days where she did not do as many she felt less happy and more bored. If she goes on for a while only watching TV, she feels down. She now makes it a point to do as many of her favourite activities as she can. In fact, she had many more than three of them and kept listing them as they came to mind.

WHY ARE PLEASANT ACTIVITIES AN IMPORTANT PART OF FEELING WELL?

Everything we do has a consequence: positive, negative, or neutral. Positive outcomes are for example being praised for a job well done or thanked and appreciated for doing a favour for a friend. Negative consequences can be like being criticized for something we did or for having our hard work go unrecognized.

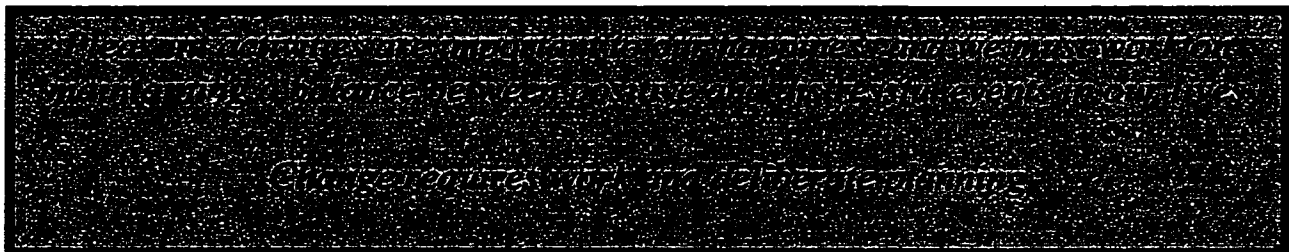
When too few of the things we do have a positive outcome we start to feel down. The same happens if too many things turn out wrong or dissatisfying. We can never stop all negative things from happening, but if there is not a balance between the negative and the positive in our lives, we begin to become down and discouraged. This is why it is important to make sure that we have enough enjoyable things and pleasant times to make up for the things that go wrong. **BALANCE** is an important part of life and is something we keep learning over and over as our lives change.

BE CAREFUL! If you have felt blue for a long time, sometimes it is easy to get caught in **NEGATIVE FEELINGS**.



In the next session we will talk about how to go about fighting back and bringing your mood back to normal. In the meanwhile, having done a lot of work so far, you are already in the position to fight back.

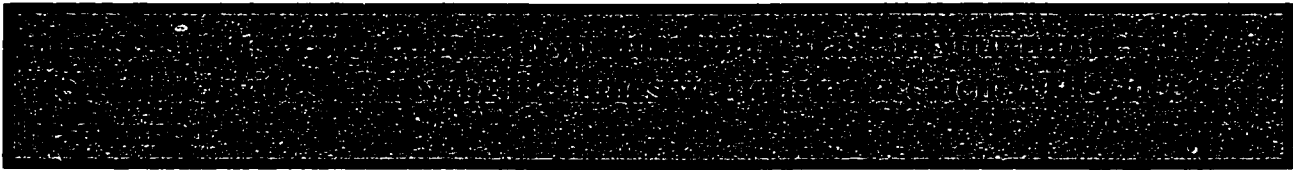
THINGS TO REMEMBER



**YOU HAVE DONE REMARKABLY WELL! EXCELLENT
PROGRESS**

Remember if you need more details about any of these topics let us know and we would be happy to provide you with more readings.

Session Four



Finding fun things to do may involve a bit of thinking. Pleasant activities are usually things that we found pleasant in the past. They could be something that you have not tried before. Give everything a chance. If it comes to mind (or someone suggests it to you) give it a go. Read this example it might help you understand what we mean:

Example:

Mr. Lavoie was interested in our mood education program, but felt that it would be hard for him to change his life in a drastic way. When we met him, he was spending most of his time watching TV and could not think of any pleasant activities that he may try. In discussion with the VON, it was possible to arrange for special transportation for Mr. Lavoie to spend two afternoons a week at a community centre. He found that he enjoyed the crafts class and to hang out in their lounge area. In fact, Mr. Lavoie made a few friends with whom he enjoyed outings and visits. Mr. Lavoie was surprised at all this and was glad he agreed to come out. At first he was not convinced that leaving his home would be a good idea and was not sure that being with people he does not know would be fun. He found out that he really enjoyed getting out.

DEVELOPING A PLAN

Commitment:

We mean being committed to your schedule. We are giving you a large side weekly planner and would like you to plan your week ahead of time. This a good way of trying to stick to things. For example, if you know that Thursday afternoons are spent at a church meeting, you won't schedule something else at that time.

Balance:

Having a plan is a good way of telling whether you have a good balance between pleasant activities that you want to do and things that you have to do. This is a very important balance. Like we talked about before, if your plan is full of stressful things that have to be done (example, income tax returns, cleaning, etc.) and nothing fun, you will have a hard week.

Sometimes, things that you have to do have a way of taking over your time. One of the important steps to feeling better is to make sure that you **DON'T GIVE UP YOUR PLEASANT ACTIVITIES**. Pleasant activities are not luxuries, they are a necessary part of healthy living.

Control:

Having some control is an important part of feeling good about life. Having a plan helps us to have this control and not feel like we are run over with demands. By controlling your time, you are able to control your life.

TRICKS TO KEEP THE PLAN SIMPLE AND SUCCESSFUL

Plan time efficiently:

Some things are done better when you set aside a large block of time for them (example, income tax returns, preparing for a big dinner). Other things can be easily squeezed in, like telephone calls, or writing short letters). It is up to you how you organize your time. These hints might help you make everything fit.

Big bites are hard to handle:

If your plan is very packed with activities, it might be hard to keep up with it. It is much more important to have a manageable plan than to have a busy one. It is hard to keep up a fast pace all the time, so it is OK if some days are slow and others are busy. In fact, this balance shows that you have worked out an excellent plan. You see, with smaller simpler plans it is easier to succeed and actually stick to the plan. If the plan is overwhelming, it is too easy to just give it up.

Plans are meant to be adjusted:

Plans are meant to be adjusted. It is good to take the time at the beginning of every week and plan for the next 6 days. Every week is different and may require a new plan. Feel free to play with each plan till it fits what you need to do and always keep your pleasant activities there.

One positive activity per day is an important rule:

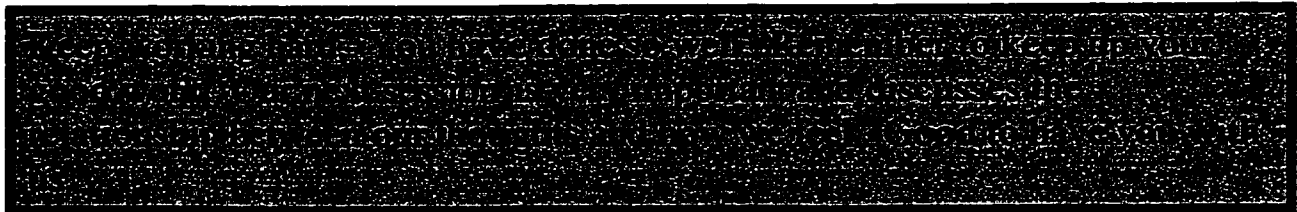
One good rule to have is to make sure that you have at least ONE PLEASANT ACTIVITY PER DAY.

Reward:

It is important to include in your plan a contract to reward yourself. What you are trying to do is not easy and takes work. In looking at your contract you may find it useful to reward yourself for tasks that you MUST do. You can use your list of pleasant activities to help you find interesting rewards. Here is an example that might help you.

Example

Mr. Albrecht planned his week on Monday and found that he had very few pleasant activities. He had to fill in his income tax report and take in his car for repairs. He also decided that he should start packing because he was moving in with his daughter in three weeks. There was not much time to do any of the things he enjoyed. Mr. Albrecht felt kind of down that week and felt like there is much work ahead of him. When reading through some of his VON mood education package, he realized that he was low on pleasant activities. Mr. Albrecht revised his plan and included a visit to his son, some TV, and Bingo. This made the week much more bearable. It was hard but he felt better and could face his move.



Weekly Plan, 1999.

DATE:					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00					
8:30					
9:00					
9:30					
10:00					
10:30					
11:00					
11:30					
12:00					
12:30					
1:00					
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4:00					
4:30					
5:00					
5:30					
6:00					
6:30					

Session Five

HELPFUL HINTS TO DECREASE NEGATIVE THOUGHTS

When people are down, they tend to think in a negative way. These thoughts are created by feeling down but can also make a person feel down. This is what we call the downward spiral. The best way to deal with this is to break the this down hill cycle. We are going to list some very useful techniques to break negative thoughts and bring back a more pleasant state of mind.

Breaking negative thoughts:

Negative thoughts can be interrupted. As soon as you notice that you are starting to think things that get you down, you can tell yourself to stop. For example, you can say "I am going to stop now, I will think about something more positive". Then without getting upset start thinking of good things. You have to be kind of forceful with yourself. Tell yourself "STOP NOW". You can do this in your head or if you are alone you can just tell yourself out loud "STOP".

Another way of telling yourself to stop is to wear an elastic band around your wrist and as soon as you start thinking about negative things snap the band against your wrist. This might work the same way as yelling "STOP".

Worrying time:

One of the ways that people keep feeling sad and blue is that they cannot get negative thoughts out of their mind. Thinking about the same thing over and over can drain you and distract you from what you are doing. Sometimes, it is true that people need to think about things or mull things over and this is reasonable. A helpful way of moderating your negative thoughts is to set aside worrying time. Decide how long you need to think

about something and set that time aside. This will help protect other times where you are spending time with others or working on something. Read our example, it might make things clear.

Example

Mrs. Maan had a daughter who was going through hard time with her divorce. Mrs. Maan did everything to help her daughter, but was always worried about her. She thought about her all day and sometimes thoughts about her daughter's sad situation kept her up part of the night. When reading through some of our thought management technique, Mrs. Maan decided to use the worrying time technique to control how much she thought about her daughter's problems. She spent half an hour in the morning thinking about ways to help and support her daughter, but then she did other things for the rest of the day and used thought STOPPING to stop herself from thinking about it during other times. Mrs. Maan said that it took her a while to get this right, but now she has more control over her thoughts than she did before.

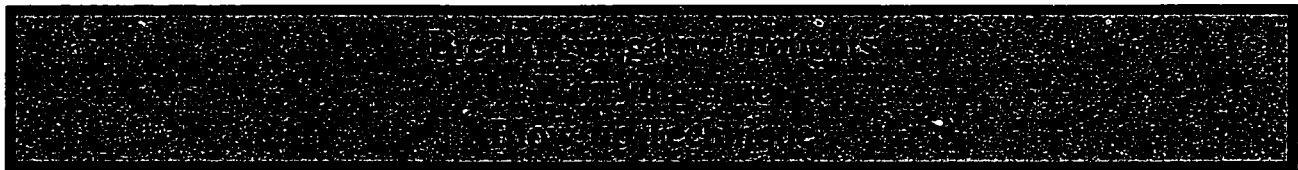
The blow-up technique:

Sometimes when we tell our concerns to a friend, this friend may say something like "Don't blow this out of proportion, it is not that bad". Others may see a situation a lot more clearly than people who are involved in it. This is something we can do for ourselves. We can help ourselves have perspective by showing ourselves that things are not that bad. We can do this by first exaggerating things and blowing everything out of proportions. This will help us see that things are not that bad. Read our example, it might explain this better.

Example

Mr. Pires had some trouble with his one morning and started to worry about what might happen if his car stopped working. He remembered that he could use blow up technique to help him put things in perspective. So, he thought “let us exaggerate what am I afraid would happen” “I would lose my car, get such all winter at home with all my friends and relatives refusing to drive me anywhere, I wouldn’t be able to afford taking cabs, I cannot make it to the hospital if I needed to, I would become in such a bad shape I would have to go to a home”. This helped him see that things could not be that bad. Mr. Pires realized that he had jumped from a small problem with his car to being placed in a home. He later got his car fixed. He had to pay quite a bit of money but with the some budgeting he was able to afford it.]

Summary of helpful ways to decrease negative thoughts

**HELPFUL HINTS TO INCREASE POSITIVE THOUGHTS****Using cues:**

Sometimes we need to prime ourselves to think positively. It is helpful to remember when we give ourselves little cues. You can choose your cues yourself. Some people remind themselves to think positively when they are eating breakfast, when they pick up their newspaper, or brush their teeth. So, every time you pick up your newspaper or brush your teeth, you will have a clue to think positively.

Notice what you accomplish:

Many people who are in a down mood don’t give themselves credit for the things they do well. Instead, they put themselves down for the things that don’t work right. Does this happen with you? If the answer is Yes, we

suggest you keep track of all of the good things that you do, even small things. Please read our example.

Example

After Mrs. Wong retired from her job, she began to feel useless and did not know what to do with her time. She had thoughts like “I am useless”, “Nobody needs me”. When things went wrong she quickly blamed herself. Mrs. Wong could not see all the good things she did. When we asked her to write a list of all of the good things she did, she was surprised to find out how much she could come up with. This is what her list looked like:

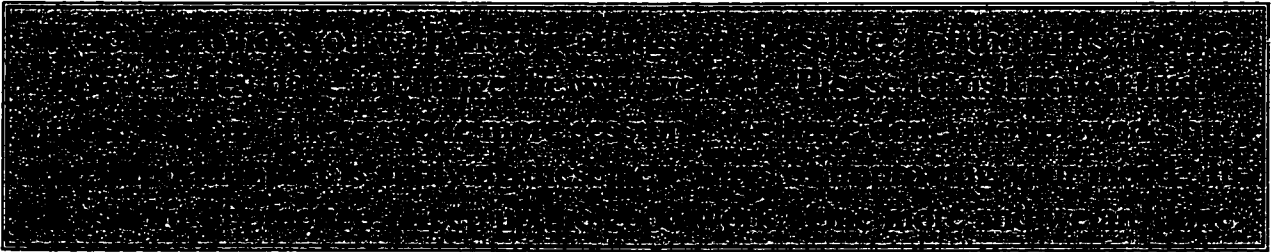
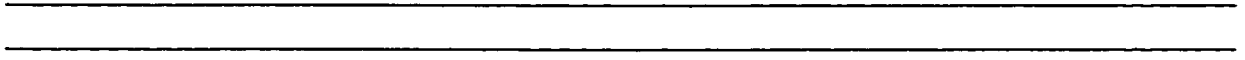
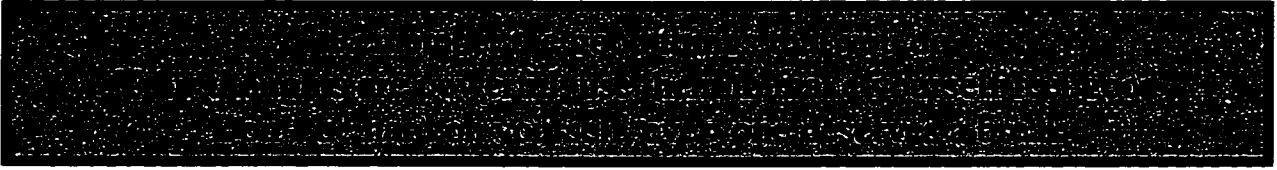
- Got up on time***
- Cooked and ate a nutritional breakfast***
- Dressed neatly***
- Called grandson, Harry, on his birthday.....***

Her list was much longer, but this was her way of giving herself credit for the things she does well and accept that things might go wrong sometimes.

Self-rewarding thoughts:

Imagine that you organized a small get-together and a few of your neighbors came. They enjoyed themselves and at the end thanked you for a wonderful time and said that the food was delicious. They loved the way that set the tables with flowers. Would it make you feel good? Of course, all of us share the need to be liked and praised by the people around us. Imagine the opposite. On their way out, the guests said that this was a boring get together and that they had indigestion. How would you feel? Awful!!!! It is natural. This is what would do to yourself if you were the one telling yourself things like “I could have done much better” or “No one really enjoyed it”. All of us need encouragement, and it is important that we give it to ourselves. It can really make a difference to our mood and feelings.

Again



Session Six

HOW TO MAINTAIN GAINS

Keeping track of how you feel:

Mood might be a little bit like blood pressure, it has to be monitored. The idea is not to wait till one is very depressed or down. If you start feeling low, take some time to think about what is going on in your life. Once you know, you could then take steps to fix it. Read our program over and over to help you remember techniques to deal with your mood. In a way, we would like you to be your own doctor. Please read our example.

Example

Dr. Campbell just retired from medicine and sold his practice. He had been busy all his life and now finds that he only watches TV. He started to feel down and often thought to himself "I am useless now, I am just waiting to die". Dr. Campbell went through our program and was able to make many changes. He joined seniors clubs and met many people his age, went on trips, and linked up with community centres that were full of activities. This was excellent progress. After a while of this Dr. Campbell noticed that his mood was going down again. He took an afternoon to think about what is happening with him. He noticed two things. First, he noticed that the number of pleasant activities that he was involved in was down for the last month. He also noticed that he was starting to think negatively again about himself. Dr. Campbell read our program over, especially the parts that talk about planning pleasant activities. He also read our session on managing thoughts. This was helpful because it reminded him of many techniques that he had forgotten.

So, keep assessing yourself and, if you need to, use our program to get you back on track. Be your own doctor.

Keeping expectations reasonable:

What we are expecting has a lot to do with how we feel about how something turns out. Read our example, it will help explain what we mean

Example

It was Mrs. Kraski's first year working at the garden. She did not expect to turn out a great garden, because it was her first go at it. She was surprised and very happy that her garden turned out wonderfully. Her flowers were very beautiful and her tomatoes did very well. She was quite pleased. The following year Mrs. Kraski expected her garden to do better since she was now an experienced gardener. Her garden turned just as well as it did the year before but for some time she was unhappy because she expected more. Mrs. Kraski remembered that unreasonable expectations can lead to disappointment. She said to herself "there is no reason to be disappointed with a garden that turned out well". Little bit by Little bit, she managed to feel better about her garden and enjoy it before winter set in.

Remember, there is no reason to expect things to be perfect. Nothing ever is, and if we expected to be we are going to be disappointed often. It is reasonable to expect things to go well, but the unexpected is a normal part of life.

Small steps and Reasonable chunks:

Big jobs are done one step at a time. This is the way our mood changes too: a little bit at a time. Sometimes people will say things like "my goal is to improve my mood". This is very positive, but too general. It kind of leaves you a little lost as to where to start. It might be a lot better to break things into smaller chunks. For example, it would be good to focus on increasing pleasant activities. Now that is a good start. We all can understand how to start doing that. Better yet, we can focus on each day at a time. For example, our goal would be to include at least one pleasant activity per day.

Major life events that influence the way we feel:

Now, that is a tough one. Some of the things that happen to us are out of our control. Some life changes can cause mood changes. What we mean by major life events are things like:

- Death of a spouse or a loved one
- Changes in residence
- Poor health
- Major injury of self or close family member
- Financial difficulties

There are many more important life events that can influence the way we feel. It will be important to pay attention to how changes such as these make you feel. Keep in mind that it takes a while to adjust to changes. You need to give yourself time to adjust.



Appendix E

Summary of Treatment Components.

Summary of the Major Treatment Components

1. Psychoeducational: The nature of Depression

Some of these reading provide the client with information regarding the nature of depression. First, introductory part of the reading describes what is not depression (e.g., depression is not just any bad feeling) and attempts to amend some of the stereotypic beliefs which surround the syndrome (e.g., depression is not abnormal or crazy). Second, various components of depressive affect are described: dysphoria, low level of activity, problems interacting with other people, feelings of worthlessness and inadequacy, guilt, problems concentrating, and physical problems which may be related to depression. In general clients will be advised to pace themselves as they see fit, but recommendations will be provided. This section (sessions 1 and 2) should be spread over two weeks.

This section will introduce clients to the link between thinking, feeling, and behaving. Concepts such as antecedents, consequences, and cognitions will be reviewed.

Also, strategies to help self-change efforts will be introduced. For example, techniques such as making contract with oneself, and how to select self-reinforcers so that they are tenable.

2. Controlling the environment: Pleasant activities

This section (sessions 3 and 4) begins the first active steps toward dealing with depression. The relationship between pleasant activities and depression is introduced. Clients are familiarized with the notion of individualized pleasant activities and mood-related activities. That is, whereas people differ markedly in regard to the specific kinds

of activities they experience as pleasurable some activities have a particular bearing on affect. Time is devoted to understanding the concepts and completing the Pleasant Activities Schedule (modified for older adults in this study, they simply list activities that they enjoy). A review list of these activities is provided as an evaluation and a record of progress.

At this point, participants are starting develop plans to increase environmental reinforcement. This is done by identifying changes that need to be made in order to restore pleasant activities that have been omitted, finding ways to cope with pressure from activities which must be done but are not pleasant, and setting manageable goals and using self reward when reaching them. A review section is provided.

3. Controlling thoughts and constructive cognitions

The section (session 5) deals with the cognitive aspects of depression. Some of the techniques used in this phase include thought counting (e.g., number of negative versus positive thoughts in a given week), and thought managing techniques. Thought management techniques focus on decreasing negative thoughts while increasing positive thoughts. Methods aimed at decreasing the frequency of negative cognitions include interruption, worry time, and the blow-up technique, whereas those directed at increasing positive thoughts include priming, noting accomplishments, and positive self-reward thoughts.

4. Looking toward the future: Integration and Conclusion

By the sixth week of the treatment (session 6) clients are invited to integrate the material and prioritize their needs (some clients may feel that they need to concentrate on pleasant activities, whereas others may feel that thought management is a precedence.

Further, clients are invited to perform regular and period reassessment of needs and goals.

That is, continually self-administer parts of the program as needed. In addition part of the integration scheme includes preparing for major life events and life changes that often cause depression. This phase of the treatment is designed to taper off the intervention and gradually decrease the involvement of intervention team with the client. It also encourages self-reliance and assumes self-efficacy in hope of maintaining the gains procured during the treatment period.

Note. The order of presentation of these components may differ in each study.

Appendix F

Time Diaries and Compliance Checks

The time diary and feedback forms are administered on weekly basis.

This section is to be completed by VON intervention personnel based on the participants' response.

Have you been able to complete the readings for this week?

Yes No

If Yes, How did you find the readings-----

This Section is to be completed by the VON personnel

1. How many visits did you pay this client this week? _____
2. How long was the average visit (this wk.)? _____
2. How long did you spend assisting the client with the bibliotherapy? _____

Please use the space below to record any additional comments you may have regarding your work with the client this week?-----

Appendix G

Questionnaires Customized for this Project

Nurses' Observation Scale for Geriatric Patients (NOSGER), modified

Instructions:

We are interested in finding out how you feel, especially in the last 2 weeks.

Reports feeling sad

all the time
most of the time
often
sometimes
never

Reports feeling worthless

all the time
most of the time
often
sometimes
never

Reports interest in what is going on around him or her

all the time
most of the time
often
sometimes
never

Appears sad/tearful

all the time
most of the time
often
sometimes
never

