PTSD AS A SOCIAL WOUND:
DO SOCIAL WOUND REQUIRE SOCIAL HEALING?

by

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Abstract

Post-traumatic Stress Disorder (PTSD) occurs in a minority of traumatized individuals but its effects can be pervasive and disabling. For instance, PTSD has a high co-morbidity rate with other psychiatric conditions, most particularly depression, eating disorders, suicidality, and addictions. The consensus of previous research is that no single treatment modality is effective in ameliorating the complex array of symptoms demonstrated by some trauma survivors (Blake & Sonnenberg, 1998). In other words, some treatments have been attributed to reductions in one cluster of symptoms but not another and vice versa. Trauma researchers are now looking to multimodal treatment programs as the treatment of choice. This research examines both the microtheory and macrotheory of a treatment program for chronic PTSD. An outcome and process evaluation of a 6-week inpatient program were conducted.

Data were collected at a minimum of one point in time on 157 individuals who were attending the *Program for Traumatic Stress Recovery*. These participants (128 women, 29 men) were all self-identified survivors of trauma, who had experienced one or more of the following traumatic experiences: severe abuse as a child or adult, natural or man-made disasters, serious accidents, work-related trauma, and combat exposure. Questionnaire data was collected at waitlist, pre-treatment, post-treatment and at four-month follow-up. Generally the symptom picture was stable prior to treatment. According to the self-report data, clients made many gains with treatment. Specifically, clients had greater body esteem and awareness, were functioning better in activities of daily living (self-care) and in relationships, experienced fewer symptoms of PTSD, reported less distress, depression, and anxiety, and held more positive views of themselves after treatment. The notable exceptions were with respect to the severity of PTSD symptoms (which did not improve relative to waitlist) and hopelessness. While clients initially gained some hope from attending the program, these gains were not maintained at follow-up. Overall it was demonstrated that this

program is quite successful in ameliorating a variety of difficulties relevant to trauma survivors in that the gains made were both statistically and clinically significant.

The program is unique in that it is offered in the context of a therapeutic community. It was hypothesized that individuals who reported predominantly positive experiences in community milieu would experience greater gains relative to their peers who reported negative experiences. Interviews provided rich qualitative data, but it was not possible to provide quantitative evidence of a moderating effect of the community. However, it was noted that clients who were viewed by treatment staff as more invested in the program did experience greater treatment gains (independent of pre-treatment status). Finally, the purpose of the process evaluation was to determine whether the treatment model was correct as specified. Specifically, relationships between program outcomes and participation in particular activities were examined in a series of regression analyses. The treatment rationale was not strongly supported, indicating that the program acts as a gestalt which is inseparable from the community milieu in which it embedded. This research offers tentative support for the notion that social wounds do require social healing.

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Dedication

This thesis is dedicated to my dear friend, **W. Heather Gorby** (1948 - 1999). She is the person who convinced me that I could benefit from attending the *Survivors Program*. She was right.

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Introduction

The purpose of the present research was to conduct an outcome and process evaluation of a unique treatment program for Post-Traumatic Stress Disorder (PTSD). The research involved the stipulation of the underlying program theory (microtheory) and an examination of the current theories of PTSD symptom maintenance (macrotheory). The Introduction begins with a review of the literature regarding the diagnosis and treatment of PTSD. The reader should appreciate that PTSD is a complex disorder with varied presentation. It is often a chronic disorder with limited treatment success. The program being evaluated is unique in that it is based on the premise that PTSD is a "social wound in need of social healing" (Bloom, 1997). Thus, all psychotherapeutic activities are delivered in the context of a community milieu which is hypothesized to be the primary agent of change. The introduction continues with a review of the literature on the treatment efficacy of therapeutic communities. Finally, in order to direct the reader to some of the issues being addressed in treatment efficacy research today, the introduction contains a section on the process of program evaluation as well as effect sizes and clinical significance. For greater clarity the introduction is divided into two sections. Part One contains the literature review and Part Two outlines the development of the program logic model.

Part One: Literature Review

Recognizing The Role of Trauma in Psychopathology

In the common vernacular, the word *traumatic* is often somewhat loosely used to refer to stressful events such as losing a job or getting a divorce. However, in the field of trauma research, it is thought to be important to distinguish between stresses that can be expected to affect a great number of people and the exceptional or unusual stresses, with which most people are totally unprepared to deal. One current dictionary defines a trauma as "an emotional experience, or shock, which has lasting psychic effect" (Websters, 1983). Throughout this thesis, trauma will be used in its narrower sense to refer to *extreme stress*, recognizing that there is no clear dividing line between stress and trauma (Allen, 1995; Davidson, 1994).

Elaborating upon modern stress research viewed from a psychoanalytic perspective, Horowitz and Kaltreider (1980) introduced the term "stress response syndrome" to describe "personal reactions when a sudden, serious life event triggers internal responses [that have] characteristic symptomatic patterns" (p. 163). Two general categories of response to stressful life events were explicated. These were denial and intrusion. Manifestations of denial could include numbness, non-response to stimuli, inability to concentrate, constricted thinking, amnesia, excessive preoccupation with how things could have happened differently, and a loss of sense of reality. Manifestations of intrusion could include excessive tenseness and alert behaviour (hypervigalance), recurring thoughts about a stressful event and its implications, the feeling of being back in a traumatic moment, sudden surges of emotion regarding an event, nightmares, and repetition of behaviour linked to the stressful occasion. Although Horowitz called this response pattern a syndrome, thereby implying symptoms of illness, his theory does not only refer to problematic, psychopathological responses, but also to "normal" psychological responses to extreme events (Kleber & Brom, 1992).

The purpose behind distinguishing between ordinary and extraordinary stresses lies in the well-established clinical tradition that there is a special phenomenological and etiological link between untoward stress and a symptom picture that has now gained formal recognition as Post-Traumatic Stress Disorder or PTSD (American Psychiatric Association, 1980). This diagnosis is one of the few psychiatric disorders that is defined on the basis of etiology (Davidson, 1994). This diagnosis has generated much controversy over the last few years, most notably, with respect to the defining features of a traumatic event. The diagnosis of PTSD presupposes the existence of a prior traumatic event (i.e. Criterion A must be met before considering the presence or absence of symptoms in Criteria B, C, and D). Thus, the definition of Criterion A in the Diagnostic and Statistical Manual of Mental Disorders (DSM) nomenclature for PTSD has taken on a great deal of importance (March, 1993). Indeed, arriving at consensus clinical opinion has plagued task force members who worked on the last three versions of the DSM. The definition of Criterion A has been continually evolving since 1980. For instance, in the DSM-III, a traumatic event was defined as a "recognizable stressor that would evoke symptoms of significant distress in almost everyone" (APA, 1980, p.238). This definition was broadened in the DSM-III-R to include those events that were

"outside of the range of usual human experience which would be markedly distressing to almost anyone" (APA, 1987, p.250). In the subscript below this definition, it was noted that this could include "serious threat to one's life or physical integrity; serious harm to one's children, spouse, or other close relatives and friends; sudden destruction of one's home or community; or seeing another person who has recently been, or is being, seriously injured or killed as the result of an accident or physical violence" (p.250). Finally, in the DSM's latest revision, traumatic experiences were defined as including both of the following: "the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others [and] the person's response involved intense fear, helplessness, or horror" (APA, 1994, p.427-428).

The DSM-IV definition for Criterion A is considered an improvement because it addresses two important limitations of its predecessors. First, in the absence of criteria to distinguish normal distress from "marked distress", agreement regarding the extraordinariness of the trauma and the universally distressing nature of the event would be very difficult to obtain (Davidson, 1994). Increasing recognition that events such as rape, incest, and criminal assault are far from rare has led authors such as Herman (1992, 1993) and Solomon and Canino (1990) to point out that these events, which are indeed traumatic, were not well represented by the "unusualness" criteria of DSM-III-R.

The second improvement in the current definition of Criterion A is the recognition of the importance of the subjective perception and appraisal in response to the event. This is something that was not represented in the previous edition of the DSM (Davidson, 1994). A wealth of research has demonstrated that appraisal of the event is quite important as a risk factor for developing PTSD, perhaps as important as the event itself (Davidson & Smith, 1990; Frye & Stockton, 1982; Green, Grace, & Glessen, 1985; Solomon, Mikulincer, & Flum, 1988).

As mentioned above, a diagnosis of PTSD can only be made following a traumatic event that meets the severity of stressor criteria. After this criterion has been met, consideration can be given to whether the patient meets the rest of the criteria for diagnosis. The symptom picture includes these three symptom clusters: persistent re-experiencing of the event (Criterion B); persistent avoidance of stimuli associated with the trauma or numbing of

general responsiveness that was not present before the trauma (Criterion C) ; and persistent symptoms of increased arousal (Criterion D). At least one Criterion B symptom must be present which includes recurrent and intrusive distressing recollections of the event; distressing dreams of the event; flashbacks to the event; intense psychological distress at exposure to events that symbolize or resemble an aspect of the traumatic event. A diagnosis of PTSD also requires three Criterion C symptoms which include: efforts to avoid thoughts or feelings associated with the trauma; efforts to avoid activities or situations that arouse recollections of the trauma; the inability to recall important aspects of the trauma; markedly diminished interest in significant activities; feeling of detachment or estrangement from others; restricted range of affect; and a sense of foreshortened future. At least two of the following Criterion D symptoms are required: difficulty falling or staying asleep; irritability or outbursts of anger; difficulty concentrating; hypervigilance; exaggerated startle response; and a physiologic reactivity upon exposure to events that symbolize or resemble the traumatic event (APA, 1994, p. 428). Finally, in order to reach a diagnosis of PTSD, the symptoms must have persisted for a period of at least one month following the trauma.

Prevalence rates. The first epidemiological study of PTSD was part of the Epidemiological Catchment Area (ECA) study conducted in St. Louis in the early 1980's (McFarlane & de Girolamo, 1996). This study revealed a lifetime PTSD rate of .5% among men and 1.3% for women. Similarly, the second wave of data collection of this same study (Cottler, Compton, Mager, Spitznel, & Janca, 1992) identified a PTSD rate of 1.35% With remarkable consistency, an ECA study conducted in North Carolina revealed a lifetime rate of 1.3% (Davidson, Hughes, Blazer, & George, 1991). However, a fourth American study reported a rate of 9.2% among randomly selected young adults at a "Health maintenance organization" (Breslau, Davis, Andresky, & Peterson 1991). To date, there are no Canadian prevalence rates reported.

It has been widely demonstrated that trauma affects large numbers of people at some point in their lives. In one recent survey, nearly forty percent of the persons surveyed had been exposed to trauma (Breslau et al., 1991). Another study that focused specifically on women revealed that 69% had been exposed to trauma at some point in their lives (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Green (1994) reports that three out of every

four persons in the United States have been exposed to some event in their lives that meets the stressor criterion for PTSD. However, it is important to note that only about one quarter of those individuals who are exposed to such traumatic events go on to develop the full-blown PTSD syndrome, with rape and combat exposure routinely producing the highest incidence rates (Foa, 1997; van der Kolk, 1996a). Despite the variation in prevalence rates, as Yehuda and McFarlane (1995) point out, the presence of PTSD following a traumatic event is the exception rather than the rule.

One of the best-documented research findings in the field of trauma is that of a *dose-response* relationship (March, 1993; Meichenbaum, 1994; Shalev, 1996; Weiner, 1992). It has been demonstrated that there is almost a linear relationship between the "dose" or amount of trauma and the severity of its effects. This finding occurs within and across a variety of stressful circumstances, including natural disaster, combat, prisoner of war (POW) experiences, criminal victimization, and accidents. It also transcends the methodological approach used which indicates that the finding is quite robust (March, 1993). However, no study identifies a threshold effect (i.e. the minimum amount of trauma required to produce symptoms).

Responses to types of trauma. Despite acknowledgment that trauma comes in many forms and the fact that there are vast differences among individuals who undergo trauma, many authors consider it appropriate to consider all forms of trauma together because there are striking similarities in the pattern of responses that cut across different types of trauma and different individuals (Allen, 1995). Indeed this been the working assumption of the DSM task force on PTSD. Nevertheless, the challenges of coping with trauma vary substantially, depending on the nature of the trauma.

On the basis of her extensive studies of traumatic experiences in children, Terr (1991) distinguishes "single blow" or "Type I" traumas from repeated traumas ("Type II"). It has been noted that single shocking events may produce traumatic reactions in some individuals. Examples include both natural and technological disasters, rape, accidents, and criminal violence. These events seem to become indelibly etched on an individual's mind as they tend to be recalled in more detail than Type II traumas. Thus, Type I traumas are more likely than Type II traumas to lead to the typical PTSD symptoms of intrusive ideation, avoidance, and

hyperarousal. A quicker recovery is more likely in single blow trauma (Meichenbaum, 1994).

As traumatic as the single-blow events may be, the traumatic experiences that result in the most serious psychiatric disorders are typically prolonged and repeated, often extending over many years (Allen, 1995). Examples include combat over many months; being a POW; as well as repeated sexual, physical, or emotional abuse during childhood. Initially these events are experienced as Type I stressors, but as the trauma reoccurs, victims expect and fear its reoccurrence. This often leads to feelings of helplessness and an altered view of the world and self, accompanied by feelings of guilt, shame, and worthlessness. Prolonged stressors are typically man-made, and this deliberate infliction of pain by our fellow members of the human race often makes them far more difficult to bear (Baum, Fleming, & Davidson, 1983; Gelinas, 1993; Tomb, 1994; Ursano, McCoughey, & Fullerton, 1994). Herman (1992; 1993) notes that this type of trauma is more likely to lead to longstanding characterological and interpersonal problems, as evident in increased detachment from others, restricted range of affect, and emotional lability. Attempts to protect the self may involve the use of dissociative responses such as denial, numbing, withdrawal, and the use of addictive substances. It is through observation of these profound sequelea of prolonged trauma that lead Herman (1992) to suggest the inclusion of a diagnosis of Complex PTSD in the DSM-IV nomenclature.

In view of the varied sequelea of prolonged abuse, Herman (1993) called for an expansion to the diagnosis of PTSD to include a disorder known as Complex PTSD or Disorders of Extreme Stress Not Otherwise Specified (DESNOS). Clinical observations identify three broad areas of disturbance that transcend simple PTSD. First, the symptom picture in survivors of prolonged PTSD often appears more complex, diffuse, and tenacious than simple PTSD (Herman, 1993). The second broad disturbance is characterological. Survivors of prolonged abuse develop characteristic personality changes, including "deformations in their sense of relatedness and identity" (p. 214). The psychiatrist, Emmanuel Tanay who works with the survivors of the Nazi Holocaust, had previously observed that among this group with chronic and severe PTSD, "the psychopathology may be hidden in characterological changes that are manifest only in disturbed relationships and attitudes towards work, the world, man and God" (Herman, 1993; p. 214-215). Finally, the

third area of disturbance involves the survivor's vulnerability to repeated harm, both self-inflicted and at the hands of others.

The PTSD working group for DSM-IV chose the designation Disorders of Extreme Stress Not Otherwise Specified (DESNOS), based on seven diagnostic criteria (van der Kolk et al., 1993). These criteria included: 1) a history of subjection to totalitarian control over a prolonged period (months to years); 2) alterations in affect regulation such as evidenced by persistent euphoria, chronic suicidal preoccupation, and self-injury; 3) alterations in consciousness including amnesia or hypermnesia for traumatic events, transient dissociation episodes, depersonalization, and intrusive symptomatology; 4) alterations in self perception, including a sense of helplessness, shame, guilt, self-blame, sense of stigma, and a sense of difference from other; 5) alterations in perception of perpetrator, including preoccupation with revenge, and acceptance of rationalizations of perpetrator; 6) alterations in relations with others, including isolation and withdrawal, disruption of intimate relationships, persistent distrust, and repeated failures of self-protection; and 7) alterations in systems of meaning as evidenced by loss of sustaining faith and a sense of despair (Herman 1992, p. 121). This classification was included in DSM-IV (American Psychiatric Association, 1994). This diagnosis was not accepted in to the DSM-IV nomenclature, despite growing support for the concept (Davidson, 1994; van der Kolk, Roth, Pelcovitz, & Mandel, 1993).

Is PTSD a normal response to abnormal circumstances? As outlined above, the premise behind developing a nosology of PTSD has been that this disorder is a normal response to an abnormal situation. This view is based on two assumptions: 1) that the incident that caused the PTSD is "abnormal"; and 2) that all of the reactions seen are within the limits of a normal response to such a stressor. It has been common to explain PTSD symptoms in view of their survival value during the traumatic event (Shalev, 1996). For example, Bremner, Davis, Krystal, Southwick, and Charney (1993) provide the following example. In terms of survival value, in the jungles of Vietnam, activation of the noradrenergic and hypothalamic systems, coupled with the strong engraving of memory traces, the promotion of the startle response, heightened attention and hypervigilance, were all quite adaptive. However, when these "coping mechanisms" persist twenty years after the trauma, when the war veteran is sitting at the dinner table with his family members, they have clearly outlived their usefulness.

Similarly, it has been argued that dissociation which protected the child victim from the full realization of the horror of the abuse they had suffered was adaptive at the time. Now denial, avoidance, and withdrawal are no longer adaptive as an adult trying to exist in non-abusive relationships.

Shalev (1996) calls the argument that PTSD symptoms arose out of once adaptive coping mechanisms the "normal response" hypothesis. This suggests that in essence, PTSD is a failure to recover from mental traumatization. In behavioural terms, symptoms are learned responses, which in PTSD have not been extinguished when necessary. Shalev challenges the assumption that trauma invariably results in psychopathology on two grounds. First, he points out that a large number of survivors of the Holocaust (in his view, one of the most extreme examples of traumatization in modern history) have somehow recovered and lived normally (Levav & Abramson, 1984). Similarly, results of a large Vietnam Veterans Readjustment Study (Kulka et al., 1990) revealed that only 15.2% of male war veterans currently suffer from PTSD. Thus, it is argued that mental illness should never be considered the expected nor the most common reaction to major trauma.

Shalev (1996) also points to a growing literature demonstrating that PTSD symptoms can occur after ordinary as well as extraordinary events. To determine whether stressors of lower magnitude (i.e. not considered to meet Criterion A under DSM-III-R) exhibit the capacity to induce PTSD, the stressor/event has been framed as the dependent variable in a few studies (March, 1993). For instance, Burstein (1985) reported that eight of seventy-three outpatients met the phenomenological criteria for PTSD without meeting the criteria for stressor severity. Examples of non-qualifying stressors included marital disruption, children's illegal activities, and the non-accidental death of a loved one. Similarly, Helzer, Robbins, and McEvoy (1987) found that miscarriage, spousal affairs, and bouts of poisoning were associated with PTSD symptomatology, although less commonly than rape or combat experiences. In addition, medical procedures (Shalev, Schreiber, Galai, & Melmed, 1993) and myocardial infarcts (Kutz, Shabtai, Solomon, Neuman, & Davis, 1994) have been implicated as precursors to developing PTSD. Thus, Shalev argues that if a chronically disabling disorder such as PTSD can result from such common events as marital discord and heart attacks, this strongly refutes the belief that PTSD is a "normal" response to trauma.

Longitudinal course of PTSD. While overall, most individuals exposed to traumatic events and disasters do quite well and do not suffer prolonged psychiatric illness (Ursano et al., 1994), for some survivors, psychiatric illness, behaviour change, and alterations in physical health result. According to Meichenbaum (1994), seventy-five per cent of any population of trauma victims will be initially dazed, stunned, bewildered, and demonstrate initial symptoms such as absence of emotion, inhibition of activity, indecision, and fear. These symptoms may last from a few minutes to hours before giving way to fears, phobias, anxieties, depression, grief reactions, guilt anger, and physical symptoms, as well as "classic" PTSD symptoms (Meichenbaum, 1994). Ten to twenty-five percent of victims so affected will display more severe impairment symptoms such as persistent disorientation, immobililzation, numbing, and feeling out of control (Meichenbaum, 1994). However, these symptoms typically dissipate within six weeks (Giel, 1990; Pennebaker & Harber, 1993). Fifty percent of those who do develop "full-blown" PTSD symptoms will recover by three months post-trauma (Meichenbaum, 1994). It is worth noting that the initial response to the traumatic events is often predictive of future adjustment. Specifically, those who display dissociative responses typically have had a poorer prognosis, that is., symptoms persist longer (Meichenbaum, 1994). Furthermore, the occurrence of depression during the months that follow a traumatic event is an important mediator of the chronicity of PTSD (Friedman, Brandes, Peri, & Shalev, 1999).

Consistent with the earlier case literature on traumatic neurosis (Kardiner, 1941), many studies have found that PTSD, once it develops, often persists over time, or occurs long after the trauma (Blank, 1993; Zlotnik et al., 1999). This is particularly so if the trauma was prolonged, as in instances of wartime combat and POW incarceration. For example the largest epidemiological study of PTSD among Vietnam war veterans (Kulka et al., 1990) revealed a prevalence of PTSD of 15%, approximately nineteen years on average after the traumatic stress of combat. More striking is the finding of Goldstein and her colleagues (1987) of a current prevalence of 50% among former World War II POWs, forty years after confinement. These findings confirm the earlier findings of Archibald and Tuddenham (1965) who reported on the 20-year follow-up of 77 W.W.II and Korean War veterans

originally diagnosed with "gross stress syndrome". Blank (1993) states that at least half of these veterans would probably qualify for the current diagnosis of PTSD.

PTSD can also persist when the trauma is of relatively short duration. For example, McFarlane (1986) found that among brushfire fighters who had a duration of traumatic stress exposure of approximately 16 hours, that 14% of them continued to suffer from PTSD symptoms more than two years after the event. Similarly, Kilpatrick et al.. (1987) found that after violent crimes, the rate of PTSD post-crime was 27.8%. With an average of 15 years time elapsed since the criminal assault, the current prevalence rate was 7.5%. Green (1994) reports that about half of those persons who develop the PTSD disorder may continue to have it decades later if not treated.

One final variant that has been noted in the development of PTSD is that at times its onset can be delayed after the trauma. Brom, Kleber, and Defares (1989) have reported that in as many as 15% of cases, the symptoms of PTSD do not surface for up to three months post-trauma. Other authors have challenged these results, citing evidence that delayed PTSD is actually quite uncommon (McFarlane & Yehuda, 1996). However, the American Psychiatric Association has retained the distinction of delayed onset in its current classification system (APA, 1994).

In any attempt to understand the longitudinal consequences of trauma, it is important that information be derived from a range of victim groups, because the outcomes of different types of trauma may vary substantially. For example, as previously noted, clinical experience suggest that the long-term consequences of child abuse are quite different from those associated with a natural disaster or other circumscribed trauma in adult life (Herman, 1992; McFarlane & Yehuda, 1996). For example, survivors of child abuse are more likely to have amnesia for the trauma and a range of dissociative symptoms (Saxe et al., 1993).

Is there one PTSD or many? In conclusion, Blank (1993) has highlighted that the longitudinal course of PTSD has many variations - acute, delayed, chronic, intermittent, residual, and reactivated patterns. Given this variation, some authors have raised the question of whether PTSD should be considered a singular disorder or a multitude of them (Davidson, 1994; McFarlane & Yehuda, 1996). These authors have suggested that as it is currently conceptualized, the diagnosis of PTSD is insufficient to describe the full range of the effects

of trauma. Rather, it is their contention that many other forms must surely exist (yet they do not explicate what these would be). Davidson (1994) outlines the psychiatric conditions that were already recognized in DSM-III-R as a possible outcome of trauma. These include brief reactive psychosis, multiple personality disorder, dissociative fugue, dissociative amnesia, conversion disorder, depersonalization disorder, dream anxiety disorder, somatization disorder, and antisocial personality disorder. Some of these diagnoses are rarely used, particularly in mediocolegal contexts. Clearly these various disorders cover a lot of territory but do not begin to make sense of the commonality that exists among survivors of various types of trauma, something that the introduction of PTSD in DSM-III was intended to do.

Despite the advances made in the articulation of PTSD, prior to the publication of DSM-IVsome authors still felt that PTSD sat uneasily in its DSM-III-R classification as an anxiety disorder (Brett, 1993). This was evidenced by an intense controversy among the DSM-III-R task force regarding whether PTSD was an anxiety or dissociative disorder (Brett, Spitzer, & Williams, 1988). Subsequently, the DSM-IV advisory Subcommittee on PTSD voted to classify PTSD in a new "stress response" category. Brett supports this change, but feels that the Subcommittee did not go far enough. She argues that PTSD should have been placed in a narrowly defined stress category, entitled, Disorders of Extreme Stress. This category would include : acute stress disorder, PTSD, and Disorders of Extreme Stress Not Otherwise Specified (Brett, 1993). This approach represents a "spectrum" approach to the classification of trauma-related disorders (Herman, 1993).

Treatment Approaches for PTSD

Given that the phenomenology of PTSD is so varied, it is not surprising that a multitude of approaches have been suggested to be used in its treatment. These run the gamut from psychodynamically oriented individual psychotherapy, to cognitive-behavioural approaches involving desensitization hierarchies and biofeedback. A brief overview of the rationale behind the major treatment approaches follows.

Behavioural and cognitive-behavioural treatments. Several models have been advanced to account for the development and maintenance of PTSD symptoms. Some of the earliest formulations were behavioural models based on Mowrer's two factor model of learning. It

has been argued that the concepts of classical and operant conditioning are critical determinants in the development and persistence of fear cues associated with the original trauma. From the perspective of classical conditioning, the traumatic event acts as an aversive unconditioned stimulus, which evokes the original unconditioned response to extreme fear. Both internal and external cues present during the traumatic experience become conditioned stimuli through their pairing with the overwhelming emotional and physical reaction to the trauma. Subsequent exposure to these cues then elicits a conditioned fear reaction. Through the principles of instrumental conditioning, the individual learns to escape or avoid contact with these threatening cues. The avoidant pattern is negatively reinforced by relief from the conditioned fear response. Thus, the conditioned fear cannot be extinguished. This two factor theory is consistent with the findings of a strong linkage between the severity of trauma exposure and increased risk of PTSD (Marmar, Foy, Kagan & Pynoos, 1994) in the trauma of rape (Kilpatrick, Veronen, & Resick, 1979) and combat (Keane, Fairbank, Caddell, & Zimering, 1989). The theory is also helpful in explaining the persistence of hyperarousal and avoidance symptoms in chronic PTSD. Interventions based on behavioural theory are designed to reduce anxiety by means of repeated or extended, real or imaginary, exposure to objectively harmless but feared stimuli (Boudewyns & Shipley, 1983). Both systematic desensitization and flooding forms of behaviour therapy have been widely used as treatments for PTSD (Blake & Sonnenberg, 1998).

A new technique, eye movement desensitization and reprocessing (EMDR) employs conditioning constructs of exposure/desensitization which incorporates a cognitive component with instructed saccadic eye movements (Shapiro, 1989, 1995). Briefly, Shapiro's technique requires the client to imagine a scene from a traumatic event, focusing on the accompanying thoughts and physiological arousal, while tracking the therapist's rapidly moving finger. The sequence is repeated until the client no longer reports anxiety, at which point the client is instructed to adopt a more positive thought while imagining the trauma and continuing the eye movements.

Behavioral techniques in the treatment of PTSD have a long history and the techniques are continually being refined. However, it has been argued that behavioural theory cannot account for a lack of development of PTSD in many cases of extreme trauma exposure.

Similarly, the theory does not explain well why some cases of PTSD resolve and others evolve into chronic PTSD (Marmar et al., 1994). Thus, other models have been formulated that emphasize cognitive processes. For instance, Foa, Steketee, and Rothbaum (1989) have highlighted the importance of appraisal processes in the perception of the trauma. Specifically, they have shown that perceived threat, predictability, and controllability are important predictors of PTSD. Other models emphasize the importance of the victims' attributions about causality and their appraisal of the meaning in relation to the traumatic experience. It is stated that cognitive distortions are an indication of shattered life assumptions experience (Janoff-Bulman, 1985). Critical assumptions about personal invulnerability, equitability, and personal self-worth may shift radically after traumatic experiences. Extreme self-blame, inability to trust others, and constant fear for personal safety may develop to the point that survivors remain hypervigilant and continuously monitor their environment for signs of danger. Thus, the development of an avoidant lifestyle is viewed as an overgeneralization from the traumatic experience to a much wider range of situations. This is termed "traumatic re-enactment" by van der Kolk and colleagues (1993, 1996a).

In terms of implications for treatment, these cognitive-behavioural formulations call for the use of guided exposure to elements of the stimulus-response scenarios in order to desensitize trauma-related cues and thereby reduce trauma-related fear. In addition, cognitive restructuring is used to facilitate accurate and adaptive interpretations of trauma. Information-processing models also suggest that direct therapeutic exposure is needed to modify faulty perceptions of danger and other maladaptive, generalized interpretations associated with the traumatic memory (Foa et al., 1989).

Distinctions between the various behaviour treatment methods for PTSD have often been made according to the primary goal of the intervention. Specifically, exposure strategies are used when the primary goal is the reduction of intrusive memories, flashbacks, and nightmares. They are also used to address current symptoms of hyperarousal. Exposure strategies include systematic desensitization, flooding, and implosive therapy. Cognitive restructuring strategies are intended to deal with problems with the meaning attached to traumatic experiences, when the related associations are maladaptive. Key cognitive

elements include issues of forseeability, controllability, and culpability. For example following traumatic experiences extreme fearfulness, mistrust, and self-blame often become prominent (Marmar et al., 1994). Thus, cognitive restructuring is used to correct these misattributions. Finally, skills training approaches are oriented toward teaching coping skills that either reduce personal distress or promote the development of additional resources to meet interpersonal demands. These techniques include relaxation training, anger management, problem-solving skills, assertiveness training, and communication skills training (Marmar et al., 1994).

Psychodynamic approaches. Psychodynamic approaches to the understanding of traumatic stress emphasize the impact of a traumatic event on the victims' self-concepts and world view. The emotional reactions of traumatized individuals who develop PTSD are thought to be the result of a discrepancy between a person's usual views and defenses and the representations of self and others that are triggered by the trauma. The discrepancies between internal and external information serve as motives for defense and control. This leads to the PTSD symptoms clusters of intrusion and avoidance. These views of self and other can be conscious or unconscious. In particular, traumatic events can activate earlier mental schemas related to danger, injury, protection, dependency, and autonomy. When post-traumatic shifts in self-concept are left unaddressed over time, deterioration in character functioning may result such that the person comes to view himself/herself as a victim or victimizer. These views interfere with mastery over the traumatic experience (Marmar et al., 1994).

According to Horowtitz (1980), Horowitz and Kaltreider (1986), and Marmar (1991), brief dynamic psychotherapy is effective for PTSD uncomplicated by other co-morbid diagnoses. This therapy centers around retelling the story of the traumatic event. The goal is to "depressurize" the trauma for the individual (Marmar et al., 1994). After this has been accomplished, individuals move on to processing the intense emotions of shame, fear, anger, and grief that are entwined with their view of themselves. As mentioned above, the final goal is to restore a healthy self-concept. To this point, these descriptions of the focus of therapy do not seem very different from what the cognitive-behaviouralists are attempting to accomplish. The key difference is that psychodynamically oriented therapy makes intentional and specific use of the relationship between the therapist and client to address the

distorted schemata about self and others. Thus, issues of transference and counter-transference are all "grist for the therapeutic mill".

Efficacy of out-patient treatments for PTSD. According to Solomon, Gerrity, and Muff (1992), "practically every form of existing psychotherapy has been tried on those suffering from PTSD" (p. 636). Although almost all of these have been described as efficacious in case reports, few have been subjected to systematic testing.

Behavioural therapies have most often been the subject of randomized trials to demonstrate treatment efficacy with many researchers reporting benefits from systematic desensitization and flooding therapies (e.g. Boudewyns & Hyer, 1990; Brom et al., 1989; Foa, Rothbaum, Riggs & Murdock, 1991; Foa, Hearst-Ikeada, & Perry, 1995; Frank & Stewart, 1983; Keane et al., 1989; Richards, Lovell, & Marks, 1994). There have also been some reports of severe complications following the use of flooding for PTSD (Pittman, Altman, & Greeenwald, 1991). Specifically, Pittman and colleagues report an exacerbation of depression, relapse of alcoholism, and a precipitation of panic disorder. Hence, these authors note that the utility of flooding may be limited and recommend using it only as an adjunct therapy. There is also a growing literature on the efficacy of the newest exposure technique, EMDR (Boudewyns, Stwertka, Hyer, Albrecht & Sperr, 1993; Jensen 1994; Renfrey & Spates, 1994; Shapiro, 1989; Silver, Brooks, & Oberchain, 1995; Wilson, Becker, & Tinker, 1995). Recently, Keane (1998) reported that the extant data support the use of all exposure therapies in the treatment of PTSD, a conclusion supported by Otto, Penava, Pollock, and Smoller (1996). Yet, the literature is not unequivocal about the utility of exposure therapies in the treatment of PTSD.

It has been suggested that behavioural techniques may work best when combined with cognitive forms of therapy (Solomon et al., 1992). Whereas the behavioural techniques are generally designed to activate fear and promote habituation, several of the cognitive therapies have been developed to reduce anxiety by providing patients with the skills to control fear. Kilpatrick, Veronen, and Resnick (1982) have adapted Meichenbaum's (1974) stress inoculation training (SIT) to be applicable to the symptom picture of PTSD. This approach makes use of a combination of several techniques including muscle relaxation, thought stopping, breathing control, communication skills, cognitive restructuring (modifying

patient's thinking and underlying assumptions) as well as stress inoculation (discussing the patient's stress reactions and rehearsing coping skills to manage this stress).

Foa and her colleagues (1991) compared the outcomes of patients treated with either SIT, prolonged exposure (i.e., flooding or implosive therapy), or supportive counseling, to a waiting list control group. Immediately following treatment, SIT was found to be the most effective treatment of the three in terms of reducing symptoms of PTSD related to re-experiencing. These patients also reported significant decreases in their depressive symptoms and in generalized anxiety. However, these gains were not maintained at the 3.5 month follow-up. In fact, after this interval, it was the patients treated with flooding who had the fewest intrusive symptoms, and the lowest rates of depression and anxiety. Yet, flooding had little impact on the avoidance/numbing cluster of PTSD symptoms. These authors explain SIT's lack of staying power as a failure on the part of the patients to continue applying the techniques after treatment, as is necessary for lasting improvement.

In 1996, Freuh, Turner, Beidel, Mirabella, and Jones published a preliminary evaluation of what they termed multi-component behavioral treatment for chronic combat-related PTSD. They noted that although intensive exposure to trauma-related cues helps to alleviate symptoms of intrusion and reactivity, the data to date indicate that exposure therapies do not have a significant impact upon avoidance, social withdrawal, and numbing. Their program involved intensive exposure therapy followed by programmed practice of structured social and emotional skills training to target the wide range of symptoms. Analysis of the pre- to mid-treatment results with those of mid- to post-treatment supported the contention that exposure alone is insufficient as a treatment of chronic PTSD. However, the sample size was small ($\underline{n}$ = 11) and their study lacked a control group. Follow-up data was not presented, again begging the question of whether these gains can be maintained. Yet, these authors are among others who are beginning to note that a single treatment is not likely to achieve the type of treatment gains needed with a disorder as complex as PTSD.

Limitations of the findings. Solomon et al. (1992) state that although in excess of 250 studies and reports have been published regarding the efficacy of various treatments for PTSD, only eleven of them have been randomized clinical trials. Keane (1998) reviews the few more clinical trials conducted since then. Even among these attempts at experimental

rigour, a lack of control was often evident. Many of the patients in these studies were also receiving concurrent treatments such as pharmacotherapy (Cooper & Clum, 1989; Keane et. al, 1989; Peniston, 1986) and "standard weekly psychotherapy" (Cooper & Clum, 1989) or a "group treatment milieu program" (Boudewyns & Hyer, 1990). It is entirely possible that these additional treatments influenced the results in unintended ways.

Efficacy of inpatient programs for chronic PTSD. The inpatient setting has been viewed by many clinicians as the best place to address core PTSD symptoms in a relatively safe environment (Bloom, undated; Fontana & Rosenheck, 1997; Hutzell et al., 1997). An essential component of PTSD treatment is believed to be an examination of the traumatic experience. Such examination often leads to intense states of anxiety and arousal. This is often best managed in an inpatient setting, with a sufficient length of stay to allow for working through and integration to begin (Johnson, Rosenheck, Fontana, Lubin, Charney, & Southwick, 1996).

In response to the problem of chronicity among the war veteran population, several Veteran Affairs (VA) hospitals in the U.S. have developed comprehensive therapeutic milieus for such veterans (Fontana & Rosenheck, 1997; Silver, 1986). Typically, in such specialized units, a wide range of modalities are offered. This includes trauma groups, exposure therapies, psycho-education, family therapy, creative arts therapies, medication, and rehabilitation. Johnson et al. (1996) report on the efficacy on a "intensive" inpatient treatment for combat-related PTSD. At the facility that is the subject of their study, the typical length of stay is 90 to 100 days (Johnson et al., 1996).

Johnson et al. (1996) examined the impact of their inpatient treatment program at regular intervals, from admission, through discharge as well as 6, 12 and 18 months post-discharge. Participants were fifty-one male Vietnam war veterans, diagnosed with PTSD. The outcome measures used included a broad range of symptom measures and indices of social functioning. Alarmingly, the overall study group showed an increase in psychiatric symptoms from admission to follow-up. Specifically, symptoms such as flashbacks, depression, and sleep disturbances did not show significant improvement, while anxiety was reported to have actually worsened at discharge (Johnson et al., 1996). The authors were encouraged by a decrease in violent thoughts and actions, coupled with a decrease in legal

difficulties over this same interval. Given that these patients were removed from their usual environment (and forced to abstain from alcohol), it hardly seems surprising that they had fewer difficulties with the law. Furthermore, patients reported an increase in morale and a decrease in social isolation as a result of the program. However, these gains were not maintained by six months post-discharge. By eighteen months follow-up, all symptoms measures were rated as significantly "disimproved" relative to admission status. Thus, veterans were reporting that their ability to relax, depression, flashbacks, sleep problems, and anxiety had all significantly worsened "as a result of the program" (p. 77). This is consistent with some anecdotal reports of deterioration in functioning with in-patient treatment (Harmand, Starkey, & Ashlock, 1987; Perconte, 1989). In contrast, other studies have reported more positive results. Silver et al. (1995), reporting on the self-report data from 100 Vietnam veterans participating in in-patient treatment for PTSD, found significant gains were noted in the areas of anxiety, anger, depression, isolation, intrusive thoughts, flashbacks, nightmares, and relationship experiences. No follow-up data were reported.

Some of the same authors from the 1996 Johnson et al. study (i.e., Fontana & Rosenheck, 1997) report on the effectiveness and cost of three different models of inpatient treatment for combat-related chronic PTSD. The three models examined were long-stay specialized units, brief-stay specialized units, and nonspecialized general psychiatric units. Data were drawn at four month intervals for one year after discharge from 785 Vietnam veterans from ten different programs across the United States. All models demonstrated improvement at time of discharge, but during follow-up, symptoms and social functioning rebounded toward admission level, especially among participants who had been treated in long-stay units. Veterans in the short-stay PTSD units and the general psychiatric units maintained significantly more improvement during follow-up than the veterans in the long-stay PTSD units. Fontana and Rosenheck conclude that the available evidence does not support the continued use of lengthy (100 days plus) stays in specialized in-patient treatment for combat-related chronic PTSD.

Wright, Woo, and Ross (1996) also report on an inpatient treatment for chronic PTSD, but with a different population. This is the program that is the focus of the current study. Patients were all self-identified adult survivors of childhood trauma, typically childhood

physical and sexual abuse. The majority of their sample were women (92 %). The treatment program is a second-generation adaptation of Bloom's (1994) sanctuary model. The concept of second generation refers to treatment programs wherein the goal is to address the client's inability to accommodate to society due to impairments in identification, distorted cognitive schemata, as well as shame and guilt. This is in contrast to first-generation treatment programs whose approach is to focus on working through the effects of (war) trauma with a variety of exposure and narrative techniques in an effort to diminish core PTSD symptomology (Johnson, Feldman, Southwick, & Charney, 1994).

The program evaluated by Wright et al. (1996) is a six-week program, believed to be unique in Canada. It is present-focused in "separating past from present and learning to live in the here and now" (p.2). Thus, there is very little focus on memory retrieval or the exploration of the particular trauma. The second focus is on creating safety in physical, emotional and relational spheres, following from Herman's (1992) stage model of healing. Finally, there is a component that focuses on the problematic behaviours in the present that interfere with healthy living. These are behaviours often linked to past traumatic experiences, and are referred to as "traumatic re-enactments" (van der Kolk, 1989). Treatment modalities used include group psychotherapy, skills training, psycho-educational groups, creative arts therapies, medication teaching, exploration of spirituality, and issues of grief and loss. These were chosen to provide the clients with a variety of means of accessing their experience (cognitive, affective, interpersonal, and experiential).

In Wright et al.'s study, patients who met DSM-IV criteria for PTSD were examined at admission, discharge and three-month follow-up with respect to symptoms of PTSD, anxiety, dissociation, depression, hopelessness, self-esteem, and anger. They found that participants reported a significant reduction in terms of both frequency and severity of all three clusters of PTSD symptoms between admission and discharge. Similarly, there were significant decreases noted in all psychiatric symptoms originally presented and an increase in global self esteem. Unfortunately, none of these gains were maintained at follow-up. All non-PTSD symptoms had returned to admission levels. However, PTSD symptomatology was not assessed at follow-up because the measure used while in hospital had been a clinician-

administered symptom inventory, (CAPS-I; Blake et al. 1995) for which there was no corresponding paper and pencil measure.

These authors consider a few explanations to account for the significant decay in therapeutic gains. Given that a large percentage of their sample (close to 35%) were noted to have borderline personality pathology, it is perhaps not surprising that therapeutic gains were not long lasting (Linehan, 1993). Specifically, the lack of post-discharge structure and services may have made it difficult for some patients to continue using the skills they had learned during treatment. Another outcome study is presently being conducted in this setting by Stalker and colleagues (Stalker, October 1999, personal communication). This study examines the role of social supports post-discharge in maintaining therapeutic gains.

It is also important to question whether the outcome measures chosen by Wright et al. (1996) assessed all the important changes that might happen within the program. Given that the program targets maladaptive behaviours and distorted cognitions, the exclusion of anything other than symptoms measures (and then not having all of them available at follow-up) may have been an oversight on the part of these researchers. The current research seeks to address this oversight by including a comprehensive battery of outcome measures. The battery used in this research includes measures of beliefs, coping behaviours, self-generated goals, and measures of positive growth, as well as symptoms. Also, given the premise that traumatic recovery is facilitated by taking part in a therapeutic milieu, the current study examined the hypothesis that experiences in the treatment community have a significant mediating effect upon outcome. I will now turn to an examination of the literature on therapeutic communities.

The Development of Therapeutic Communities in the Treatment of Mental Illness

The British psychiatrist, Maxwell Jones (1953, 1976) is credited with being the founder of a psychiatric movement that swept across the United States in the 1950's and 1960's. This movement rested on the belief that rather than concentrating on issues of "mental hygiene", psychiatry should be directing its attention to "designing a whole culture which will foster healthy personalities" (Jones, 1953, p.236). This required sweeping changes to the way mental health services were conceptualized and delivered. The result was the

establishment of therapeutic milieu units in many psychiatric facilities throughout North America. The premise behind these "therapeutic communities" is the view that patients are capable of powerfully benefiting one another. Ideally, once the community is established, it will develop an identity of its own which can be utilized to improve the individual just as the individual will enhance the function of the community (Almond, 1974; Cumming & Cumming, 1962; Wilmer, 1981). In sharp contrast to what was typical at the time, Jones advocated greater patient responsibility in their own treatment and democratic as opposed to autocratic operation of units.

Efficacy of the therapeutic community. Early studies were not very promising in demonstrating enhanced benefits for psychiatric inpatients being treated in community-oriented milieus compared to those being treated in more traditional wards. In one study members of community-oriented wards experienced a greater sense of autonomy and personal involvement which led to greater satisfaction with their treatment. However, during the two-year follow-up, neurotics treated on the community-oriented ward were readmitted twice as frequently as those on the ward utilizing the traditional medical-model. In addition, a greater number of patients from the therapeutic communities left the hospital against medical advice (Lehman & Ritzler, 1976). In a similar study, patients randomly assigned to short-term milieu therapy for depression and other neurotic syndromes showed no significant pre-post or pre-follow-up changes (Boudewyns, 1974). Patients receiving implosive therapy and desensitization therapy did significantly better. Boudewyns concludes that in view of its cost, controlled studies of the effectiveness of milieu therapy should be carried out before its use is continued. Other authors have contended that this data is already in. They argue that there are actually "anti-therapeutic" factors (Rachman & Heller, 1974) at work in some therapeutic communities making them inappropriate for some patients (e.g., disorganized schizophrenics; Van Patten, 1973; violent and sexual offenders, arsonists; Rosenthal, 1984). Both Rachman and Heller (1974) and Kernberg (1981) have called for a thorough re-evaluation of the value of therapeutic communities as a treatment modality.

Despite cautions, the use of therapeutic milieus has continued to proliferate and they have been widely used to treat persons with substance abuse disorders for over twenty-five years (de Leon, 1989; Rosenthal, 1989). It has been argued that these programs are generally

effective for those who are chemically dependent. DeLeon (1982) compared treatment dropouts with graduates of a community-oriented treatment for drug abuse. Graduates reported lower drug use, and higher employment relative to their non-completing peers. Furthermore, Schinka et al. (1999) reported decreases in depression and anxiety 12 months post-discharge among cocaine-dependent women treated in a therapeutic community. Sacks and Levy (1979) demonstrated decreased psychopathology among young adults who abused recreational drugs and were residents of a drug-free community. These positive changes were correlated with length of treatment. It is noteworthy too that patients who left before completing treatment had pre-treatment MMPI scores indicating difficulty in developing social relationships. This finding makes particular sense given the increased demands for sociability inherent in a typical community-oriented treatment program. Thus, the socially-avoidant psychiatric patient may be another individual for whom treatment in a therapeutic community is ineffective or inappropriate.

Therapeutic communities seem to be much less widely used for psychotic individuals relative to other patients, likely because of their tendency to be socially withdrawn. Yet Mosher (1991) sees great promise for this modality with this population. He compared the effectiveness of a non-hospital alternative treatment program for schizophrenics with that of traditional inpatient services. Results from six-week outcome data for all patients treated over a five-year period revealed that the interpersonally based therapeutic milieu was as effective as neuroleptic drugs in reducing acute symptoms of psychosis (in newly diagnosed psychotics). For those treated in a therapeutic community longer-term outcomes (of two years) were as good or better than conventional hospital-treated controls on measures of independence, autonomy, and peer-based social networks.

There have been demonstrations of improvements in a population notoriously difficult to treat, the psychopath. Copas, O'Brien, Roberts, and Whiteley (1984) have reported decreased antisocial behaviour among patients with psychopathic personality disorders following a minimum of 6 months treatment in a residential therapeutic community. Decreases in violent offending were maintained three to five years post-discharge. In 1985 McCord published some impressive 25-year follow-up data on the effectiveness of milieu therapy with young psychopaths. Immediately following treatment, boys treated at a school

with milieu treatment showed a decrease in anxiety, aggression and prejudice, as well as increases in self-esteem and self understanding. The re-conviction data revealed rates of 8% for the milieu school and 32% for boys treated at the traditional school.

The literature is not unequivocal regarding the efficacy of the therapeutic milieu. Some studies have reported worse or null outcomes for those treated in therapeutic communities (Boudewyns, 1974; Lehman & Ritzler, 1976), while others have reported positive results (e.g. Copas et. al, 1984; Koster & Wagenborg, 1988; Rosensky, Honor, & Rasinski, 1983; Sacks & Levy, 1979) In order to make sense of this apparent contradiction, the issue of goodness of fit to the therapeutic modality needs to be considered (Feist, Slowiak, & Cooligan, 1985). Kuldau (1978) was one of the first to provide evidence that patient characteristics and needs may interact with the therapeutic modality to determine the effectiveness of treatment. Ninety-one "socially marginal" male psychiatric patients were randomly assigned to two hospital units, both espousing community values. The one unit focused on assisting patients to get employment in the community, while the other followed a conventional psychiatric treatment program. The two major outcome variables were repeat hospitalizations and employment, one year post-discharge. There were no significant differences in outcome between patients treated on these two units. In order to explore treatment-patient interactions, patient subgroups were differentiated along the lines of employment history and residential stability. For the control sample (Ward C), variables indicating better previous adjustment were negatively correlated with follow-up hospital time. However, the correlations obtained from the E unit sample were in the opposite direction. Thus, these authors concluded that treatment differences interacted with patient background variables such that superior employment outcomes tended to be correlated with patients with better prognoses; while superiority in reducing hospitalizations was concentrated in patients with poorer prognoses. A single treatment focus had different impact on different clients. It is difficult to make sense of such a result in the absence of more a detailed conceptualization of "community values", both in this specific case and in general. In other words, what makes a therapeutic community therapeutic?

Measuring the climate of the therapeutic milieu. A few authors have attempted to determine the components of milieu therapy that ensure quality of care and enhanced benefits

to clientele. This work began by Rudolph Moos (Bliss, Moos & Blomet, 1976; Moos & Houts, 1968) who has dedicated his scholarly career to the measurement and assessment of therapeutic environments. He first developed the *Ward Atmosphere Scale* (Moos, 1974) to measure the social climate of psychiatric treatment programs. Moos' measure was subdivided into ten scales assessing the relationship, treatment program, and system maintenance dimensions of the ward in question. The *Ward Atmosphere Scale* was later adapted to be more applicable to community-oriented programs by substituting references to the "ward" and "doctors" with the more generic and inclusive terms, "community members" and "staff". This version was named the *Community Oriented Programs Environment Scale (COPES).*

Both the *Ward Atmosphere Scale (WAS)* and the *Community-Oriented Programs Environment Scale (COPES)* have been administered in a variety of settings from traditional psychiatric wards to residential treatment centres and group homes. From this work it is clear that programmatic changes do affect program climate and that specific changes in treatment regime and organization of the treatment milieu do positively influence specific program dimensions (Bliss et al., 1976; Lewis, Garfield, Orsini, & McCusker, 1994; Manning, 1989; Moos, 1974; Werbart, 1992). The question has remained whether the program changes actually had the desired effect.

Friedman, Glickman and Kovach (1986) administered the Moos' *COPES* to adolescent clients and drug counselors in 30 different "drug-free" out-patient treatment programs. The more positive the ratings of program environments, the greater the reduction in client-reported drug use from admission to discharge. While this study is interesting and certainly a good first step, it is important to note some aspects of it which might limit its generalizability. The clients used in this study were all participating as out-patients. No other details were given regarding the format of treatment. It is conceivable that the youths spent their entire day in treatment, returning home each evening. However, this arrangement is somewhat different from the concept of a therapeutic community that has been discussed up to this point in the paper. Traditionally, the term therapeutic community is used to refer to settings in which the clientele all reside with one another, necessitating sharing of living and eating space. Self-government is an important component as well in that clients must

determine for themselves how conflicts are to be handled. It is not clear how the ability to leave the "community" on a daily basis contributes to one's perceptions of it.

General Conclusions Regarding the Treatment Literature Reviewed

There seem to be wide differences of opinion as to what constitutes experimental rigour in studies of treatment outcome. In the PTSD literature, the results of studies utilizing randomized clinical trials have been favoured over non-experimental designs, only to find out that these experiments did not fully rule out alternative explanations for their findings. As mentioned above, participants in the clinical trials were often receiving concurrent treatment (Solomon et. al, 1992). Thus, contamination very likely occurred. In the therapeutic community literature, two approaches have been widely used: comparing graduates with drop-outs and comparing different treatments (often without random assignment). There seems to have been a preference for comparing the milieu with traditional treatments. While some studies have been able to demonstrate that the clients perceived some benefit from their experience, often these benefits did not translate into objective outcomes. Manning (1989) argues that it is not surprising when such designs fail to demonstrate the superiority of one treatment over another because a "spot the winner" approach explains little. In his view, traditional experimental designs have failed because they have mistakenly considered a whole approach (i.e., the therapeutic community) as a single variable. Comparing treatment programs is not very helpful when they are multi-dimensional. Rather, each constituent dimension must be considered, and then links between program processes and the outcomes may become more apparent. This is what the current research aimed to accomplish. Before describing the present project, I will turn to the literature on program evaluation to highlight the steps required to obtain valid and reliable findings.

Effect Sizes and Clinical Significance

Recently the treatment outcome literature has been criticized for its heavy reliance on statistical tests to determine the efficacy of treatments (Kazdin, 1999) While effect sizes give us additional information beyond statistical significance (i.e. whether two means are statistically different from one another), several authors are now arguing that this information

is almost useless in the absence of an assessment of the clinical significance of the findings (e.g., Jacobson & Revenstorf, 1988; Jacobson, Roberts, Berns, & McGlinchey, 1999; Jacobson & Truax, 1991; Kazdin, 1999; Kendall, Mars-Garcia, Nath, & Sheldrick, 1999; Tingley, Lambert, Burlingame, & Hansen, 1996). According to Jacobson and Truax (1991) the use of statistical tests to evaluate treatment is limited in at least two ways. First, the tests provide no information on the variability of response to treatment within the sample (information that is of utmost importance to clinicians). Second, statistical significance has little to do with clinical significance. For example, a two pound weight loss among obese people in treatment could be deemed to be significant when compared to the control group who lost an average of 0 pounds. The effect size could be quite large if there was little intra-group variability. Yet the large effect sizes would not render the results any less trivial from a clinical standpoint. In other words, the results would be statistically significant but not clinically. Although large effect sizes are more likely to be clinically significant than small ones, even large effect sizes are not necessarily clinically significant (Jacobson et al., 1999).

In contrast to criteria for statistical significance, judgments regarding clinical significance are based on external standards. In other words, consumers, clinicians and researchers all expect treatment to accomplish certain goals and it is the extent to which it meets these goals that determines its clinical significance. While there is little consensus in the field regarding what these standards should be, various criteria have been suggested. Typically, the notion of a return to normal functioning is usually included in the definition of clinical significance. With this in mind, Jacobson et al. (1984) proposed a statistical approach to clinical significance with three ways that the process of therapy might be operationalized. Definition A stipulated that the level of functioning subsequent to therapy should fall outside the range of the dysfunctional population where the range is defined as extending to two standard deviations beyond (in the direction of functionality) the mean for that population. Definition B stipulates that the level of functioning subsequent to therapy should fall within the range of the functional or normal population, where the range is defined as within two standard deviations of the mean of that population. Finally, the third definition (Definition C) is the least arbitrary. This definition states that change is clinically significant when the level of functioning subsequent to therapy places the client closer to the mean of the functional

population than it does to the mean of the dysfunctional population (Jacobson & Truax, 1999; p. 13). These authors advocate using the third definition but this requires norms for both a clinical and non-clinical population. It is acknowledged that this is often not possible with many clinical instruments readily used in current outcome studies (Jacobson et al., 1999). Thus, the first two definitions are used when only one set of norms are available on a given measure. This is often the case in the present research. I will now turn to describing the process of program logic model development.

The Process of Program Evaluation

Posavac and Carey (1992) state that the first crucial step in planning a program evaluation is to identify the "stakeholders" (p.28). This is consistent with the *Program Evaluation Standards* published in 1994 (Joint Committee, 1994). Stakeholders are persons who are personally involved in the program and thereby have some interest and familiarity with it. This could include program staff, patients, community groups affected by the program, and program sponsors. Typically, program personnel are more personally involved in a program than either the sponsors or the clients (Posavec & Carey, 1992). Thus, including the program staff is a necessary minimum requirement to utilizing the stakeholder's approach. The purpose behind involving program staff in the process is twofold: First, they are important sources of information about the way the program is conceptualized and delivered. Second, if they assume ownership of the project, they will provide maximum support during data collection, and will be more likely to utilize the findings.

An second important methodological consideration is whether to use internal or external evaluators in researching a treatment program. An internal evaluator is part of the organization and is accountable to persons who are part of the internal management of the organization (Posavac & Carey, 1992). Typically an internal evaluator has firsthand knowledge of the organization's philosophy, policies and politics. This may permit the selection of evaluation methods tailored to the reality of the organization (Love, 1991). Being well known (and hopefully trusted) also has the advantage of making program directors and staff more willing to devote time to the evaluation, to admit problems, and to share confidences that they might not with an outside consultant (Posavec & Carey, 1992).

In contrast, external evaluators have the advantage of being independent of both the program and the organization they are evaluating. They are accountable to both those in the organization and those outside of it (such as the scientific community in the present case). Given that outside evaluators are not dependent upon the organization for an income, they may be more objective and willing to address sensitive issues. An internal evaluator may be hesitant to report critical findings because future work may be jeopardized. Clearly, the decision of whether to use an internal or external evaluator could have a dramatic impact on the results of the evaluation.

A complete understanding of a given program is gained by examining both the outcome of the program and the process that occurred to effect desired changes (Posavac & Carey, 1992). It has been argued that it is of limited usefulness to know that a program produced changes in its participants without knowing how or why these changes came about. Furthermore, knowing that the program produced poor results is not very helpful if one does not know whether it was implemented as planned. Likewise, an analysis of program procedures often tells you little in the absence of information about whether these procedures led to the desired result. Thus, a comprehensive evaluation includes both a process and an outcome evaluation (Joint Committee for Program Evaluation Standards, 1994; Posavec & Carey, 1992).

Prior to carrying out the process and outcome evaluation, it is desirable to build an evaluation framework. This pre-evaluation stage (Phase 1) consists of developing a program description, specifying program objectives, outlining program activities and specifying the linkages between these activities, and hypothesized outcomes. After this framework is in place, one can proceed with Phase II, the actual process and outcome evaluation. This evaluation should apply safeguards to ensure that reliable and valid measures are used to document the manner and extent to which specified activities produce the desired outcomes (Rutman, 1977). It is the responsibility of the evaluator to insist on methods that will produce valid results (Korabik, 1996).

Phase I should be an integral part of any program evaluation because it involves developing a program theory. Programs make assumptions, either implicit or explicit, about the cause of the problem being addressed. Often evaluation studies attempt to determine

whether an intervention is effective in solving complex and long-standing problems. Unfortunately, as Lipsey (1985) showed, over 70 percent of the studies in a representative sample of published treatment effectiveness research offered either no theory or only general statements of the program strategy or principles. Fewer than ten per cent presented any theoretical context beyond the empirical relationships between the variables under investigation. Clearly what was missing was an integrated theory linking program elements, treatment rationale, and treatment processes (Lipsey, 1993). The current research seeks to address the atheoretical nature of the studies examining the efficacy of PTSD treatments. The proposed research involved developing, and then testing a theory of PTSD treatment.

Articulation of the program theory is built on the foundations of a Program Logic Model (Unrau, 1993; Wong-Reiger & David, undated). This has also been called an impact or flow model (Rush & Ogborne, 1991). The program logic model is the set of guiding hypotheses that underlie the planning and implementation of a program. It provides the rationale for the existence of a program that establishes the linkages between the perceived need for the program, the program's activities, and it objectives or effects. Thus, there are two levels of theory inherent in an impact model: the microtheory of the impact of a particular program; and the macrotheory which is the model of social or psychological change (Korabik, 1996).

Operationally, the development of a program logic model involves identifying program goals and objectives and then linking them to program activities. This ensures that all the objectives of the program are represented. When outcome studies are embarked upon without this step, measures are often chosen because they appear to have good face validity or make intuitive sense. However, they may lack construct validity or fail to address issues of predictive validity. For example, the conclusions that could be drawn from the Wright et al. (1996) study were limited by the narrow range of outcome measures selected. While it is often the case that many of the measures selected purely on the basis of face validity are identical to the measures that would be chosen after the process of model development, the possibility exists that, when this step is omitted, some important desired changes are not being examined. The development of the logic model ensures that all desired aims and objectives are examined as part of assessing the overall question of whether the program is effective.

A program logic model specifies the logical relationships between four categories. These are: 1) the activities provided, 2) the service delivery outcomes, 3) the intermediate results, and 4) the ultimate results. Specifying these relationships puts us in the position of postulating a causal process that examines two relationships. The first is the relationship between a program activity and a desired intermediate change. Often this includes a change in attitudes, knowledge, or motivation. Typically, these direct results are called intermediate in that they are not sufficient to reduce a given problem in and of themselves. Often it is the behavioural changes that are considered the ultimate results because they are more nearly indicative of lasting change (Wong-Reiger & David, undated). Thus, specifying program theory can help to identify intermediate objectives. For example, in a program designed to control obesity by changing eating habits, theory might specify that a person must know what foods are appropriate to eat. Therefore, knowledge of appropriate foods would be an intermediate goal (Korabik, 1996).

The second relationship being tested in the impact model is the one between the intermediate changes and the ultimate results. There are many possible ways in which these linkages can occur. For instance, in some programs the link between intermediate results and eventual behavioural change is only implied. Other programs explicitly provide activities that help participants bridge the gap between awareness, knowledge, attitudes or motivation and behavioural change. Some programs are involved with the participants only long enough or intensely enough to create changes in their willingness or capability to carry out certain behaviours. In these instances it may be more appropriate to identify behavioural intentions as the ultimate result, that is, the program would be considered successful if it increases the likelihood that participants will perform the desired behaviours at a future time.

Finally, developing the impact or program logic model can be considered a matter of construct validity. The program is an operationalization of the constructs underlying the program. In order to determine if the particular program is a valid operationalization of these constructs, the nature of the theory underlying the constructs must be explicated and the particular elements of the theory must be specified. Failures to demonstrate program effects can be due to: 1) adoption of the wrong program theory; 2) the program being implemented

improperly; or 3) a faulty evaluation design. If the latter two can be eliminated by research, a faulty theory is the most likely culprit (Korabik, 1996).

Part Two: Program Logic Model Development

Stakeholders/Participants

A treatment program for clients with PTSD was devised and implemented in a private hospital (Homewood Health Centre) in Guelph, Ontario. This program has come to be known as the *Program for Traumatic Stress Recovery (PTSR)* and is the program that was initially evaluated and reported on by Wright et al. (1996). The program had been in existence four years when this project was undertaken.

The current program evaluation of the PTSR proceeded according to the general process outlined above. This program evaluation has utilized a stakeholder's approach wherein those who are both familiar with and invested in the program have participated in developing a logic model of the treatment program. It is important to note that as a researcher, I occupy the role of an external evaluator, but that I also bring the perspective of a stakeholder as a former client of the program. Although autonomous in terms of accountability, I possess valuable knowledge of the workings of the program. Thus, it is felt that this unique role offers both the advantages of the internal and external evaluator, while avoiding many of the pitfalls.

The first step in the present research was to establish a working group of stakeholders to be involved in the process. The main "research team" was composed of the five full-time clinical staff of the *PTSR*. This team included a Social Worker, Psychologist, Occupational Therapist, Psychological Associate, and Psychiatrist. Meetings were held on a weekly basis over a period of three months to explicate a thorough program description, and to develop a treatment model for the *PTSR*. This entailed specifying the objectives of the program and then relating each program activity to the objectives. As necessary, meetings were also held with other clinical staff such as the Expressive Arts Therapist, and the Chaplain, to clarify the nature of the activities they offered to clients. In addition, these clinicians were questioned

regarding their view of the change-enhancing elements of their groups and the program in general. What follows is an account of this collaborative process which constituted the pre-evaluation phase of the study.

Program Description

The *Program for Traumatic Stress Recovery* takes place in a semi-self-contained treatment unit housed in a private mental health facility (Homewood Mental Health Centre in Guelph, Ontario). Typical length of stay is six weeks as an inpatient. Clients residing in a specified wing of the hospital are all participants in the *PTSR*. Occasionally some overflow beds are occupied by clients involved in a more general, voluntary inpatient program. The *PTSR* treats 25 patients at one time, with a waiting list for the services. The other half of the wing is occupied by participants in an eating disorders unit. There is no co-ordination of program components, but nursing staff are responsible for clients from both programs.

All residents on this one floor (regardless of program affiliation) are considered to be part of a therapeutic community and expected to participate as such. This community approach is considered to be the unique aspect of this program. This important feature has been incorporated with credit given to Sandra Bloom's "sanctuary model" (Bloom, 1994). It stems from the theory that social wounds (such as childhood trauma) require social healing. All the therapeutic work occurs in the context of this community.

Target population. The unit began operating in the fall of 1993. The *PTSR* was originally developed to address the special needs of survivors of childhood trauma (and was formerly titled the *Survivors* program). A central tenet of the treatment philosophy holds that there is an etiological connection between unresolved childhood trauma and resulting difficulties in adult life. Clients typically experience symptoms and behaviours that fit the classic triad of chronic Post-Traumatic Stress Disorder (APA, 1987; 1994), which includes hyperarousal symptoms, intrusive recollections of past trauma, and constricted lifestyles that are organized to avoid triggers that cause further emotional pain. For individuals whose trauma occurred in childhood, there can be additional distorting effects in self-perceptions and perceptions of relationships. For example, clients typically experience considerable guilt and shame about their experiences and have a general distrust of others (McCann &

Perlman, 1990). Although not a formal diagnosis, clinicians at Homewood, consider Herman's (1992;1993) conceptualization of Complex PTSD to be a useful way of thinking about the symptoms patterns of many of the clients.

In the spring of 1997, the target population was expanded to include survivors of adult trauma in addition to childhood trauma. These clients typically present with less complicated forms of PTSD, often the result of natural disasters, motor vehicle accidents, criminal victimization, or work-related trauma exposure (such as military personnel, police officers, and fire fighters). While previously the majority of participants were women (Wright, et al. 1996), this change in target population has led to greater numbers of men with PTSD being treated at Homewood. The expansion of the population served has not resulted in any substantial changes to the activities or the way in which the program is delivered. This stems from the belief of Homewood personnel that treatment does not need to be specific to the type of traumatic experience that led to the development of PTSD. This view is in contrast to others such as Blank (1993) and McFarlane and Yehuda (1996) who contend that contradictory results in the literature regarding the efficacy of treatments for PTSD derive from the high degree of heterogeneity in the PTSD population. Furthermore, Blank criticizes researchers for "overgeneralizing" and discussing the "PTSD that they are studying as though it were *the* generic PTSD"(1993, p.16). He asserts that in order for the field to move forward, the type of trauma experienced must be noted in all studies of the longitudinal course of PTSD and the effects of various treatments. Clearly, the rationale of the Homewood *PTSR* rests on a validity assumption (i.e. that trauma is trauma) that needs to be explicitly tested.

Clients are all self-identified victims of traumatic events. No effort is made to ascertain the veracity of their stories. Referrals typically come from a client's outpatient therapist. The client is often already addressing issues related to their traumatic experience, and the referral has been prompted by a setback of some sort; for example, an exacerbation of symptoms, flooding of new memories, or an outbreak of self-destructive behaviour. The unit is not a crisis unit, but rather an intensive voluntary program to which it is believed a client must make an individual commitment in order to realize change.

Inclusion criteria. Each referral is reviewed by a pre-assessment team to determine the candidate's suitability for the program. Typically, clients are suffering from chronic PTSD, major depression or dysthymia, anxiety disorder, somatization, dissociative disorders, and/or personality pathology. The predominant personality pathology noted has been borderline personality structure (as much as 35% of the 1995-96 sample reported by Wright et. al, 1996). Clients of this program have also been noted to demonstrate features consistent with narcissistic, anti-social, and histrionic personality disorders. The exclusion criteria are conservative, excluding those whose symptom complexes are so severe that it prevents the individual from participating in the program. In instances where the client needs stabilization or pharmacotherapy prior to entering the program, this has been made a condition of acceptance.

In addition, the client must have maintained six months' sobriety prior to entering the program. It is widely held that trauma work cannot proceed in the face of an active addiction (Briere, 1992; Bloom, 1994; Marmar et al., 1994; van der Kolk, 1996a). Furthermore, the unit is not designed to be a multiple personality or dissociative disorders unit. Thus, individuals who have demonstrated a high dissociative capacity that is not under appropriate control have been asked to leave the program. Given staffing limitations, the unit functions exclusively in a group therapy model (with limited one to one time with a prime nurse therapist). Therefore, clients must be able to function in groups, even at a basic level, in order to have a successful stay.

Admission process. Approximately 250 clients are admitted to the program each year. Clients are admitted to the program on a continuous basis. On the same day each week, clients are admitted, while others are discharged. Thus, at any given time, the clients are approximately equally spread throughout all weeks of the program. This is an intentional feature of the program and it stems from the theory that therapeutic community works best when it consists of members who are at various stages in their recovery and in their current course of treatment (Bloom, 1994). It is anticipated that those clients who have made gains during their stay, can act as powerful role models for those who are in earlier stages of their treatment (de Leon, 1989). Furthermore, it is argued that being exposed to the ways in which people challenge past trauma offers each patient hope and a feeling of universality.

Universality has been defined as a growth enhancing attitude of the form that "If others can heal, then so can I "(Yalom, 1995). Numerous studies in the group therapy literature have shown universality to be a key therapeutic mechanism of group process (Oppenheimer, 1984).

Given that this is a private hospital, the major funding source is third party payers who pay premium rates for semi-private and private accommodation. There are a few "ward" beds which are covered by provincial health insurance. The waiting list for these beds is approximately 18 months long, whereas the wait for the preferred accommodation is much shorter. At times, those willing or able to pay the premium price can receive treatment within a few weeks of being screened. This has important implications for the generalization of findings and the utilization of the wait-list baseline.

Program Components

The patient's progression through the program is as follows. After admission there is a week-long assessment period as both patient and treatment team evaluate the patient/program match. The treatment philosophy is explained and it is considered important that the client understand that the stay in the unit is only one piece of work in the healing journey of recovering from trauma (Herman, 1992).

Once the full program starts, the client is involved in daily group therapy as well as education and skills groups. Referrals are made to additional groups to provide more specific focus on topics as needed by each client. For the purposes of this research, the numerous program components have been categorized into eight groups based on similarities in treatment modalities. Four of these groupings represent activities that are core to the program and the other four are less central but also considered important aspects of the multi-modal treatment package. The program components are:

Core Activities - These are activities that make up the backbone of the program. There is most often at least one mandatory group per category but clients can elect to add additional service in any of the areas.

1. Body/Awareness and Esteem Activities. As the name suggests, these activities were all related to enhancing body awareness and esteem. These included discussion groups on body esteem issues as well as training in techniques such as body scanning and relaxation training.

2. Didactic and Skill Building Activities. These activities were didactic in nature and often provided information about the role of trauma in development, patterns of victimization and traumatic re-enactment, as well as family dynamics. Also taught were such skills as assertiveness, anger management, and adaptive coping to deal with flashbacks and other symptoms.

3. Process Oriented Therapy Groups. These groups did not have specific content but allowed clients to bring their own issues to discuss to provide the content. Examination of the group process was the major therapeutic mechanism. Clients attended a process group every day, making these groups the cornerstone of treatment. Clients could also elect to attend optional process groups on sexuality and other topics which were also included in this category.

4. Community Building Activities. These activities were classified together because their primary goal was to enhance the sense of community in the ward. These activities included the daily community meeting and walk (which were mandatory) as well as the weekly party which was held to celebrate the graduation of each participant who was to be discharged that week.

Non-Core Activities - These activities are considered less central to the treatment program and are more often optional.

5. Expressive Arts Therapies. This category was used for groups whose main treatment modality was not traditional talk therapy. This included art therapy and dance movement therapy.

6. Leisure Activities. While clients were encouraged to pursue leisure activities on their own time (to assist in the development of a balanced lifestyle), there were several mandatory groups that addressed issues such as barriers to leisure. Horticulture therapy was also offered. Both free-time activities and attendance at the treatment groups were included in this category.

7. Spirituality Activities. As the name suggests, these activities were aimed at helping clients develop their spiritual selves. These were usually led by a chaplain and involved discussion of such issues as meaning in life, forgiveness, and loss.

8. Individual Interventions. These activities were the exception rather than the rule. The program is designed to be offered in group format, however, from time to time clients required consultations from physicians, dieticians, social workers, or addiction counselors. At other times, clients were taken aside individually to reflect on their progress or lack thereof. Finally, as each client had their own prime nurse therapist, the amount of time spent in individual consultation with them was also included in this category.

More information regarding each of the activities subsumed under these headings is presented in Appendix A. A Table provides details of the length and frequency of the sessions as well as the number of leaders and their background disciplines. The objectives of each of the groups are provided in text that follows the table.

The Program Objectives

One of the important steps in the pre-evaluation process is the generation of the ultimate and intermediate objectives. It was determined that the ultimate objective to be achieved after the six week program was to foster the desire to continue healing. Thus, in a client ready for discharge, the following should be observed: a) a plan for the next step in healing; b) a set of skills mastered or planned to master; and c) a generalization of awareness.

In order to achieve this ultimate objective, a number of intermediate objectives were generated. These objectives span a wide range of domains, including behaviours, symptomatology, expression of emotion, self-perception and quality of relationships.

1. Clients will develop increased **body awareness** and improved **body esteem.**
2. Clients will develop more adaptive ways of **coping** with stress thereby decreasing their use of maladaptive coping strategies.
3. Clients will demonstrate an increased ability to engage in **self-care** activities.
4. Clients will learn the skills necessary to maintain physical, emotional, and relational **safety**.

5. Clients will experience a reduction in the **intrusive/re-experiencing** symptoms of PTSD as defined by DSM-IV (PTSD:B).

6. Clients will experience a reduction in the **avoidance/numbing** symptoms of PTSD as defined by DSM-IV(PTSD:C).

7. Clients will experience a reduction in the **hyperarousal** symptoms of PTSD as defined by DSM-IV (PTSD:D).

8. Clients will experience a reduction in **other symptoms** such as anxiety, depression, dissociation, self-harm, somatization, suicidality, and/or sexual dysfunction.

9. Clients will learn to sense, identify, and **express emotion** more appropriately.

10. Clients will decrease their sense of isolation, learn about healthy relationships, and develop a sense of healthy boundaries (physical and emotional); that is clients will foster positive **beliefs about others.**

11. Clients will increase their self-esteem and decrease their sense of shame and guilt; that is clients will foster positive **beliefs about themselves**.

12. Clients will increase their sense of **hope**.

13. Clients will enhance their sense of **meaning** in life and/or develop their **spiritual connection** with a "higher power" as defined by them.

After these objectives were generated, the next task was to ensure that each objective was represented by at least one treatment activity. Love (1991) refers to this step as the development of a program function model. In the case of the Homewood program, there are multiple activities aimed at meeting each objective. The full Program Function Model provided in Appendix B was tested as part of the process evaluation.

The Treatment Theory and Program Logic Model

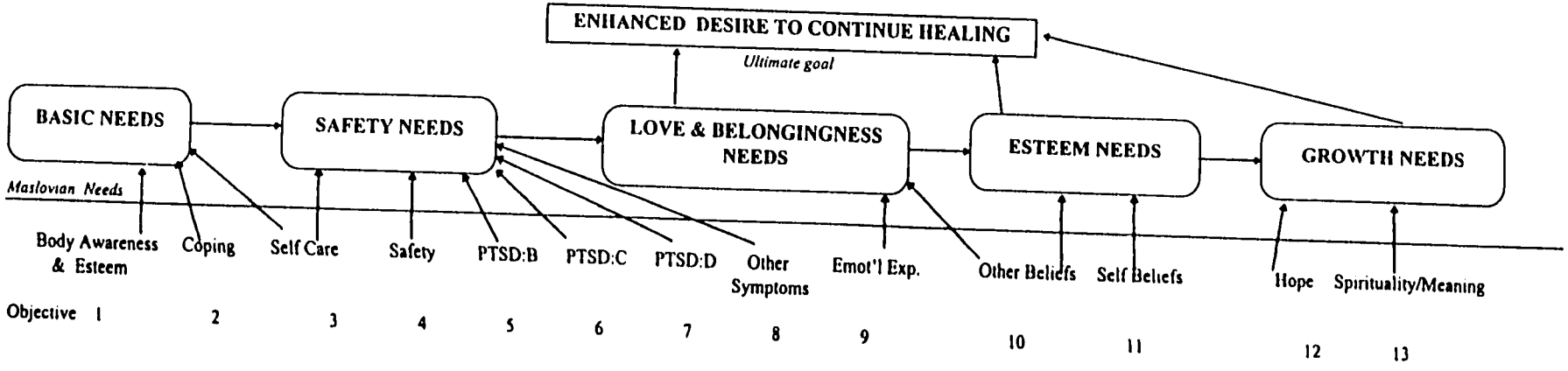
While articulating the theory underlying this program, it was recognized that there was a certain primacy of some objectives and as such they could be placed on a continuum similar to Maslow's hierarchy of needs (see Figure 1). Maslow (1970) proposed a theory of human motivation that he termed a "holistic-dynamic" theory. At the absolute foundation of all motivation was the need to satisfy basic physiological needs such as food and water. Also included in these basic needs are the need for rest and exercise. Second only to these drives

is the need for safety. Maslow defines safety as having security, freedom from fear, and an absence of pain. Safety needs also include the need for structure, order, stability and protection. In ascending order, the hierarchy of needs continues with the need to be loved, the need for self-esteem and esteem from others, and finally growth need or "self-actualization". According to Maslow's theory, one cannot proceed up the hierarchy until the need beneath it has been generally satisfied. While it is true that occasionally one will neglect some physiological needs and become hungry, thirsty, or tired, persistent nonsatisfaction of these needs will prevent graduation to the next higher level.

Trauma is the antithesis of order, protection, and security (Everly, 1995). It may also represent a devastation to one's self-perception, in that it often challenges core beliefs about one's own vulnerability (Janoff-Bulman, 1985). Everly has proposed that regardless of which higher order Maslovian need has been attained prior to being traumatized, "trauma automatically drops one back to a quest for a lower-ordered need for safety" (1995, p. 40). Furthermore, because trauma represents a contradiction to the quest for safety and autonomy, any further growth is stifled until the need for safety can once again be satisfied. Some authors have argued (without reference to Maslow) that severe trauma in childhood usually results in impairment of basic trust and pathological changes in identity (Herman, 1993; van der Kolk, 1996a). Adopting a Maslovian stance would indicate that traumatized persons must satisfy their need for safety and security before proceeding to higher order tasks of re-examining their beliefs about themselves and others. This has important implications for treatment.

Figure 1 depicts the Program Logic Model developed. Working from the bottom up, the first level in the model details the treatment activities available in the *PTSR* . They are organized according to which of the 13 objectives they are designed to address. Continuing up the model, the next level depicts the 13 intermediate objectives of the *PTSR*. Linkages are made from the activities to the objectives they were designed to address. On the next level are the five groups of needs as conceptualized by Maslow (1970). These are arranged from lowest to highest according to Maslow's hierarchy. Hence, the arrows drawn from left to right indicate that in general, a lower need must be satisfied sufficiently before an individual has motivational energy to address a higher need. As discussed earlier, stressors leading to

Figure 1. Program Logic Model



Intermediate Goals

Body Awareness & Esteem Activ.	Coping Activities	Self-care Activities	Safety Activities	PTSD: B Activities	PTSD: C Activities	PTSD: D Activities	Other Symptoms Activities	Emotional Exp. Activities	Other Belief Activities	Self Belief Activities	Hope Activities	Spirituality Activities
Body Awareness Process-Oriented Community Expressive Arts Leisure Spirituality Individual	Body Awareness Didactic/Skill Process-Oriented Community Leisure Spirituality	Body Awareness Didactic/Skill Process-Oriented Community Expressive Arts Leisure Spirituality Individual	Body Awareness Didactic/Skill Process-Oriented Community Expressive Arts Leisure Individual	Body Awareness Didactic/Skill Process-Oriented Expressive Arts Individual	Body Awareness Didactic/Skill Process-Oriented Expressive Arts Individual	Body Awareness Didactic/Skill Process-Oriented Community Expressive Arts Leisure Spirituality Individual	Body Awareness Didactic/Skill Process-Oriented Community Expressive Arts Individual	Body Awareness Didactic/Skill Process-Oriented Expressive Arts Leisure Spirituality Individual	Body Awareness Didactic/Skill Process-Oriented Community Leisure Spirituality Individual	Body Awareness Didactic/Skill Process-Oriented Community Expressive Arts Leisure Spirituality Individual	Body Awareness Didactic/Skill Process-Oriented Community Expressive Arts Leisure Spirituality Individual	Body Awareness Didactic/Skill Process-Oriented Community Leisure Spirituality

Program Activities

PTSD impact people at a variety of levels, often pushing them all the way down to the bottom of the hierarchy (far left). Thus, some PTSD sufferers are at the level of trying to re-establish basic safety. Others are functioning better, that is, are able to meet some of the higher-order needs, but also demonstrate specific deficits in achieving some of their lower needs. Finally, the uppermost level of the model depicts the ultimate objective of the *PTSR*. This is to enhance the client's desire to continue healing. This level may be akin to Maslow's need for self-actualization. Although entirely too challenging of a objective, not likely appropriate to a chronic psychiatric population, a desire to achieve self-actualization via continued healing may occur once a person begins to feel that they are a person of worth, worthy of being loved and understood. Linkages are drawn from love and belongingness needs, esteem needs, and growth needs, to represent that once a survivor is working at this level, they have likely met the ultimate objective of the program.

What follows is more explanation of eight program objectives other than the management of PTSD symptoms, that are particularly important in the treatment of trauma survivors with chronic difficulties. A justification for their placement in the logic model is provided:

Body awareness and esteem. One of the cardinal features of PTSD is the avoidance/numbing that often results in survivors ignoring basic body functions. For example, eating disorders are common especially among sexual abuse survivors who learn to deny body cues (van der Kolk, 1996a). In other cases, hyperarousal symptoms have distorted a survivor's sense of when it is necessary to sleep. Thus, gaining adequate body awareness must precede attainment of the remainder of the objectives in the hierarchy.

It has been noted that it is common for victims of trauma to harbour negative attitudes about their bodies. This may be because their bodies have been used as a source of pain, or because a sound, smell, or motion may bring a very negative reaction. These negative attitudes often stand in the way of recovering, perhaps because they keep a survivor trapped in a cycle of denial of bodily sensations and blaming of oneself for the trauma that the body has suffered. Inherent in Homewood's program is the premise that healing must occur in the mind, the body, and the spirit. In order to do so, negative beliefs about one's body must be reframed.

Coping. As outlined earlier in Part One, treatment of PTSD has long been based on the premise that the symptoms represent coping activity that may have been adaptive in the face of the trauma but are no longer useful (e.g., dissociation during abuse or hypervigilance in the jungles of Viet Nam). This view contradicts the contemporary views of authors such as Shalev (1996), but suits the therapeutic style of the clinicians much better. In terms of the hierarchy of objectives, attaining adaptive coping skills (such as active coping, seeking social support) is an important tool in meeting the objectives of self-care and safety.

Self-care. Integral to the program is the expectation that clients will engage in appropriate levels of self care such as getting appropriate amounts of sleep and recreation, eating three meals per day, pacing themselves through the program activities, and making assertive statements about their needs. This is closely related to the expectation that clients will participate fully in the program by managing their own schedules and attending all assigned groups. Thus, the program is structured in such a way that the daily lives of clients approximate a normal schedule and it requires the client to engage in activities of daily living. Given that many clients may have been having difficulty operating on a normalized schedule due to their PTSD symptoms, the structure of the program affords the client with

valuable practice in this aspect of daily life and allows them to make the best use of program activities. This approach is similar to that outlined by de Leon (1989) in his discussion of longer term therapeutic communities for rehabilitation from substance abuse.

Safety. Herman (1992) has outlined three stages in the recovery from traumatic experiences. The first she aptly calls "Safety". According to her model, the first task of recovery is to establish the survivor's safety. This work takes precedence over everything else because no other therapeutic work can possibly succeed if safety has not been adequately secured. This approach addresses symptoms of PTSD at the most basic level. Survivors of trauma often feel unsafe in their bodies. Their emotions and thinking may feel out of control, and they may feel unsafe in relation to other people. Establishing safety begins by focusing on control of the body, gradually moving outward toward control of the environment. Issues of body integrity/physical safety include: 1) attention to basic health needs; 2) regulation of bodily functions such as sleep, eating, and exercise; 3) management of post-traumatic symptoms; and 4) control of self-destructive behaviours. Establishing safety in the environment includes such things as: 1) establishing a safe living situation; 2) ensuring financial stability, and 3) developing a plan to deal with crises in daily life. Herman strongly believes that no one is truly able to establish safety alone. Rather, safety must include the component of social support. This makes the therapeutic milieu a valuable tool in healing from trauma.

The *PTSR* has based a lot of their program philosophy on Herman's model of recovery. Therefore, the program is designed and implemented in such a way that clients first must learn about safety and be able to maintain it in order to be able to participate in other aspects of the program. Maintaining physical safety is a minimum requirement of the program and a building block to obtaining other objectives. Although the ability to maintain safety is primarily assessed during assessment week (as it is a requirement to continuing on for the next five weeks), it is indeed something that is continually monitored.

Emotional expression. Persons with PTSD are characterized by extremes in emotional expression. On the one extreme, a survivor may demonstrate a numbing of emotion and a general lack of responsiveness to the environment. At the opposite extreme, a survivor may experience intense episodes of anxiety, grief, or rage, with feelings of retaliation or

accompanied by explosive behaviours. Often the survivor fluctuates between numbing/withdrawal and hypervigalence/overarousal. This has lead some authors to note that a core feature of PTSD is a basic difficulty in affect regulation (Briere, 1992; van der Kolk, 1996a).

Recently, some authors have proposed that the emotional lability present in PTSD may be more complex than a tendency to vacillate between under and over-expression of affect. Krystal (1978) was the first to suggest that trauma results in a "de-differentiation of affect". By this Krystal meant that trauma survivors had lost the ability to identify specific emotions that serve as a guide for taking appropriate action. In the case of severe abuse from early childhood, it is possible that this ability never did develop (van der Kolk, 1996b). Krystal further noted that the inability to create semantic constructs to identify bodily states was related to the development of psychosomatic disorders and to aggression against oneself and others.

There is a word for the condition Krystal (1978) was describing. The term "alexithymia" was coined by Sifneos during the late 1970's. Its literal translation from the Greek means "absence of words for emotions" (Taylor, 1994). Sifneos' goal was to designate a cluster of cognitive and affective characteristics observed among "classical" psychosomatic diseases. The most striking features were a marked difficulty in identifying and describing feelings verbally, a reduced ability to create fantasies, and thought content that revealed preoccupation with minute details of bodily symptoms. In recent years, alexithymia has been shown to be normally distributed in the general population and is considered a personality risk factor for a variety of medical and psychiatric disorders (Taylor, 1994). Alexithymia is related to both a reduced ability to feel pleasurable emotions and a person's susceptibility to experiencing poorly differentiated emotional distress. It has been further hypothesized that alexithymic individuals are prone to experiencing such undifferentiated emotional arousal because they lack the cognitive capacity to represent and modulate emotions (Krystal, 1988). A similar observation has been made about individuals with PTSD (van der Kolk, 1989; 1996a).

Addressing the range of difficulties with emotional expression is a third major component of the *PTSR*. This is done in a variety of ways, making use of the multi-disciplinary team.

For instance, difficulties identifying and expressing emotion are examined on a cognitive level through education groups, on a behavioural level through skills groups, and on an interpersonal level in such groups as expressions and process groups. It has also been noted that sufferers of PTSD are often prone to action and deficient in words, but they can often express their internal states more articulately in physical movements or pictures (van der Kolk, 1996). Thus, expressive arts therapies such as art therapy, dance movement therapy, and body esteem education have all been included in the treatment curriculum.

Beliefs regarding others/beliefs regarding self. As outlined in Part One, Herman distinguishes simple PTSD from a more complex version that is characterized by disturbances in the survivor's sense of self and sense of relatedness to others. The distortions in sense of self include helplessness, guilt, self-blame, and a sense of stigma of difference from others. Alterations in relationships with others are manifested in isolation, withdrawal, persistent distrust and repeated failures of self-protection. Indeed, it is these difficulties which led Bloom (undated; 1994; 1997) to describe trauma as a "social wound" that requires "social healing". It is the traumas that have been levied by the hands of our fellow citizens that have the most damaging effects (Meichenbaum, 1994) and thus it is Bloom's contention that only a healing community can repair the most extreme forms of the damage.

Hopelessness and loss of meaning. Janoff-Bulman (1985) has articulated the impact of "shattered assumptions" on survivors of trauma. Commonly survivors come to believe that the world is an unjust and unsafe place. This view is reinforced by the fact that persons who have been victimized are at increased risk of being re-victimized (Meichenbaum, 1994). Depression is the most common co-morbid feature of PTSD (Davidson & Fairbanks, 1994); whether it is a cause or an effect on chronic PTSD remains to be determined. In any case, avoidance and pessimism only serve to prolong the survivor's distress and slow the recovery from trauma. The goal of enhancing hope and meaning in life has been articulated as a objective of the program because it is postulated that a more hopeful client will have an enhanced desire to continue to recover.

Hypotheses to be Tested

After explicating the treatment model, the purpose of the current research was to test this program theory with reference to the microtheory of how this particular program works, and to the macrotheory of recovery from PTSD. Specifically, the hypotheses that were tested are as follows:

1. The program theory is correct as stated. Thus, relative to their status at admission, clients will report improvements at discharge with respect to the 13 objectives of the program. Sub-hypotheses 1a) through 1m) state that each of the 13 objectives of the program are met.

2. If all of the 13 objectives are not all met, it is hypothesized that objectives considered to be lower on the hierarchy will be the ones that are met.

3. The program functions as articulated in that more substantial improvements are related to more time spent in objective-related activities.

4. It is hypothesized that clients' perceptions and experiences in the community milieu will have a significant impact upon the gains made in the program.

Method

Participants

Participants were current or potential clients who attended or were on the waiting list for the *Program for Traumatic Stress Recovery (PTSR)* between September 6, 1997 and September 4, 1998. This resulted in a potential sample of 265 persons. These individuals were contacted either by letter (when on waiting list for entry to the program) or in person upon entry into the program. Seventy-six of them did not respond to mailings while waiting to enter the program. Of these 76 persons, 47 subsequently canceled their application to attend the program, while the other 29 remained on the waitlist at the completion of data collection. These 76 people, therefore, did not become participants in the study. In addition, thirty-two individuals who did attend the program declined to participate. Thus, the initial response rate was 83.1% or 157 of the 189 who actually attended the program during the year of data collection.

Outcome Measures

Objective 1: Body awareness and body esteem - *Body Attitudes Questionnaire (BAQ)*. This 21-item questionnaire (see Appendix C) was created specifically for the purposes of this research. It was designed in consultation with the clinicians who created and facilitated the group activities designed to improve body awareness and body esteem. Its content covers body shame, depersonalization, awareness of pain and pleasure, as well as specific attitudes towards one's body related to the traumatic experience. The items were factor analyzed using an orthogonal rotation. This yielded a very interpretable two-factor solution of body awareness (7 items) and body shame (11 items) that explained 68% of the variance collectively. The factor loadings for the 21 items are presented in Appendix D. Three items that did not load well were omitted from further analysis. The internal consistency reliability estimates of these 2 factors were $\alpha = .71$ and $\alpha = .61$, respectively.

Health Questionnaire. The Somatic Complaints scale from the *Personality Assessment Inventory* (Morey, 1991) was utilized. This 24-item scale (see Appendix E) contains items covering conversion symptoms, somatization, and health concerns. The full-scale has been

shown to be quite internally consistent, with alphas reported as .89, .83, and .92 in a census, college, and clinical sample respectively. In the present sample, the obtained Cronbach's alpha was .89. In terms of test-retest reliability, co-efficients of .68 to .81 have been reported for a combined sample.

Objective 2: Adaptive and maladaptive coping - *COPE Scale.* This is a well-validated measure which assesses an individual's preferred way of coping with stress (Carver, Scheir, & Weintraub, 1989). The 60 items are subdivided into 15 subscales (see Appendix F). In general, the Cronbach alpha coefficients have been found to be acceptable. The values generally range between .63 and .92. When test-retest reliability was examined in two samples over a six and an eight week interval, it ranged from .42 to .89. This indicates that self-reports of coping tendencies that are measured by the *COPE* are relatively stable, although not as stable as personality traits.

In an effort to reduce the number of dependent variables, the 15 subscales of the *COPE* were factor-analysed to yield broader coping factors. A three factor-solution (see Appendix G: Table 12b) was found to account for 53% of the variance with 13 of the 15 subscales loading. The three factors created include: 1) "problem-focused coping" which is made up of the planning, positive reinterpretation, restraint coping, active coping, suppression of competing activities, and acceptance subscales; 2) "emotion-focused coping" which included venting, seeking social support and use of religion; and 3) "disengagement coping" which included mental disengagement, behavioural disengagement, and denial. The internal consistency of these newly created factors was good to excellent, at .87, .89 and .72, respectively. It is not surprising the remaining two subscales, alcohol and drug use, and humour did not perform well in the factor analysis. The authors have reported that they are exploratory in nature (Carver et al., 1989).

Objective 3: Self care - *Canadian Occupational Performance Measure (COPM).* This is a measure which has been developed by several occupational therapists (Law et al., 1991, 1994). It is a standardized, semi-structured interview which assesses three areas of client functioning: self-care, productivity, and leisure. These are considered "activities of daily living" in occupational therapy terms (Toomey, Nicholson, & Carlson, 1995). Clients are requested to identify problem behaviours in each of the three areas and rate their performance

and satisfaction level on a ten point scale. This client-centered measure can then be used to formulate treatment objectives.

The *COPM* has been adapted to the survivor population and this program. It was used both to assess the efficacy of the program and to assist in developing individual treatment objectives. During assessment week, patients attended a session conducted by an occupational therapist who is part of the clinical staff with the *PTSR*. During this session, clients set three to five recovery goals for themselves[1]. The clients were instructed that these goals were to be macro-goals such as returning to work or managing finances more effectively. Then the clients rated their current status in terms of their performance and satisfaction on a scale of one to ten for each goal. All clients were also asked to rate their ability to maintain safety on the same scale. A second session was held prior to discharge, at which time clients re-rated their performance and satisfaction. For use at four-month follow-up, the *COPM* was adapted to a paper and pencil version, with questionnaires being tailored for each client to reflect the goals generated during the pre-treatment interview.

The goals set by the clients were subjected to a content analysis performed by two staff occupational therapists. The categories derived were selected to reflect typical occupational therapy dimensions, that is, productivity, recreation, and leisure. The categories of "relationship goals", "feelings goals" and "spirituality goals" were added to reflect the content and objectives of the program. Each rater placed each goal in one of the six categories, rating the responses independently. Subsequently, their categorizations were compared for reliability. The two raters agreed on 98% of the 276 goals rated. The few discrepancies were easily resolved, yielding 100% inter-rater agreement. The ratings made by the clients could be used as a dependent measure of four of the program objectives, (i.e. self-care, emotional expression, beliefs re others, and spirituality). Because there was an insufficient number of productivity and leisure objectives, these two types of goals were subsequently dropped from all other analysis.

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[1] Throughout this paper, the goals that the clients created for themselves will be referred to as "goals", whereas the goals of the program (as generated by the clinicians) will be referred to as " objectives".

The COPM has been found to have adequate psychometric properties. Reliability was investigated by measuring changes in function among patients in rehabilitation services, wherein major changes were not expected in a short period of time. The test-retest reliability for the performance and satisfaction scores of the *COPM* were .63 and .84 respectively. Ratings on the *COPM* have been correlated with global ratings made by clients, caregivers, and therapists with low to moderate correlations expected. The obtained correlations ranged from .30 to .62 indicating that the *COPM* is responsive to changes in global function (Law et al., 1994).

Objective 4: Safety - *TSI Belief Scale* and *COPM*. The *COPM* safety ratings are described above. The *TSI Belief Scale* is a measure of distorted cognitions about oneself and others in terms of esteem, intimacy, safety, trust, and control. One of the safety scales (self) was used separately here. The internal consistency coefficient (Cronbach's alpha) obtained in the present sample was .83. This was consistent with the figure reported by McCann and Perlman (1992). See Appendix H for a copy of the entire *TSI Belief Scale*.

Objectives 5,6, 7: PTSD: Cluster B, C, and D - *Modified PTSD Symptom Scale)*. Post traumatic symptoms were assessed via the *MPSS-SR* (Falsetti, Resnick, Resick, & Kilpatrick, 1992, 1993) which is a modification of the *PSS-SR* scale, created by Foa, Riggs, Dancu, and Rothbaum (1993). Modifications included the addition of severity assessment and slight differences in the wording. The *MPSS-SR* (see Appendix I) is a simple 17 item self report measure that provides both frequency and intensity data on symptoms that correspond to the DSM-IV symptom criteria for PTSD (Falsetti et al., 1992; 1993). Thus, it is possible to determine the presence or absence of symptoms for Criteria B, C, and D, assessed for the two-week period prior to the time of administration, using the frequency scores as dichotomous variables if diagnostic criteria are met. The *MPSS-SR* can also be scored as a continuous measure.

Falsetti et al. (1992) have reported on the psychometric properties of their instruments in both treatment and community samples. Their participants had experienced a wide variety of traumatic events. In both samples, the *MPSS-SR* demonstrated good overall internal consistency. Alphas of .96 and .97 for the treatment and community samples were obtained

with the full-scale. In the present sample, the obtained values for the full 17 items were α = .84 for the frequency of symptoms and α = .90 for severity. Internal consistency of the re-experiencing, avoidance and arousal subscales were excellent, ranging from .88 to .94. Although test-retest reliability co-efficients on the *MPSS-SR* are not available (Falsetti, April 23, 1997, personal communication), this data is available on its precursor, the PSS-SR. Foa et al. (1993) report test-retest reliability co-efficients of .66, .56, and .71 for the Criteria B, C, and D subscales, and .74 for the full-scale over a one-month period.

Objective 8: Other symptoms - *Trauma Symptom Inventory*. This 100-item questionnaire (see Appendix J) was developed by Briere (1995) and provides a number of clinical scales relevant to survivors of trauma. These scales include depression, anxiety, dissociation, tension-reduction behaviour, and sexual dysfunction. Each symptom item is rated according to its frequency over the past six months, using a 4-point scale. Given that respondents were requested to assess changes pre- and post-treatment, the instructions were changed, with permission of the author (Briere, April 19, 1997, personal communication).

The ten clinical scales were normed on four different samples (clinical and non-clinical) and shown to be internally consistent. Briere (1995) reports the alpha coefficients to be .84 to .87. Similar results were also obtained in the present sample, that is, .76 to .89, with one notable exception. The intrusive experiencing subscale only yielded a Cronbach's alpha of .53. Due to this, and in the interest of reducing the number of outcome variables, the subscales of the *TSI* were factor analyzed. An economical two-factor solution (see Appendix K) was produced which yielded two highly reliable factors (α =.96 and .91). These factors were identical to those reported by Briere (1995) and are consistent with trauma theory. The first factor has been labeled by Briere "generalized traumatic distress" which represents a composite of dysphoric symptoms and impaired self references as well as the more traditional PTSD symptoms. The second factor has been labeled "self regulation" as it is a composite of sexual concerns, destructive sexual behaviours, and tension reduction behaviours.

Objective 9: Identify and express emotion - *Toronto Alexithymia Scale (TAS-20)*. This measure is a 20-item scale (see Appendix L) which assesses: 1) the degree to which persons

can identify emotions; 2) the degree to which an individual can attribute body sensations to different emotions; and 3) an externally-oriented cognitive style (Bagby, Parker & Taylor, 1994; Bagby, Taylor, & Parker, 1994). The TAS-20 demonstrates good internal consistency. Mean alphas of .81, .80, and .83 were obtained in the derivation, student, and psychiatric sample, respectively. The value obtained in the current sample was . 79. The test-re-test reliability, assessed across a three week interval, was reported to be .77 (Bagby et al., 1994a).

Objective 10 & 11: Other Beliefs and Self Beliefs - *Traumatic Stress Institute Belief Scale.* This is an 80-item scale (see Appendix H) assessing a person's core beliefs about self and others in terms of safety, trust, intimacy, control, and esteem (Perlman, MacIan, Johnson & Mas, 1992). Respondents are asked to rate the degree to which they agree with each statement of belief on a six-point scale, ranging from strongly agree to strongly disagree. This measure was normed across five criterion groups, representing both clinical and non-clinical samples. The internal consistencies reported for the 10 scales (5 dimensions each for self and other) were quite adequate. They ranged from .73 to .89 for the most recent version and .68 to .83 in the present sample. Test-retest data have not been reported. In the interest of parsimony, this measure was factor analysed (using subscales as items). As indicated in the factor loadings presented in Appendix the self items all loaded together on a single factor with the other items loading on a second factor. The internal consistency of these two factors (31 items each) was excellent at .90 for self and .89 for other.

Objective 12: Hope - *Beck Hopelessness Scale (BHS).* The *BHS* has been used extensively in studies of depression as an indirect indicator of suicide risk. It is a 20-item scale (see Appendix N) which assesses negative attitudes about the future, that is, pessimism or hopelessness (Beck, Weissman, Lester, & Trexler, 1974). Respondents reply either true or false to the twenty statements, yielding a maximum score of 20. The general guidelines for interpretation state that scores of 0 to 3 should be considered within the normal range or asymptomatic; scores of 4 to 8 should be considered mild; 9 to 14 is moderate; and greater than 14 is severe.

The reliability of the *BHS* has been assessed in a variety of clinical samples yielding Kuder-Richardson reliabilities ranging between .82 and .93. In the present sample, Cronbach's alpha was calculated to be .93. Thus, the *BHS* maintains high internal consistency

across a variety of clinical samples. Test-retest correlations across a one week interval were reported to be .66 and .69 across a six-week interval, for two different clinical samples. Excellent content, concurrent, discriminant, construct, and predictive validity have all been demonstrated.

Objective 13: Spirituality/Meaning - *Post Trauma Growth Inventory (PTGI)* and *COPM.*

The *PTGI* (see Appendix O) consists of 21 items which assess the degree to which a person views positive changes occurring as a result of their traumatic experience (Tedeschi & Calhoun, 1996). Respondents are asked to rate each positive change on a 6-point scale, ranging from "I did not experience this change at all as a result of _____ to "I experienced this change as a great deal". It should be noted that the sample used to validate this measure was taken from psychology classes at a large university. Respondents were predominantly young, single persons, whose traumatic events included such things as bereavement, unwanted pregnancy, academic problems, and separation or divorce of parents. Clearly these do not meet criteria A for PTSD (APA, 1997). However, twenty-one per cent of respondents reported traumas of criminal victimization or injury-producing accidents. The respondents who participated in the validation sample were responding to traumas that they had experienced in the past five years, with the majority occurring in the past two years. The sample at Homewood differs considerably from this as it consists largely of patients who experienced their traumas as much as several decades ago, many of whom have experienced multiple traumas. Given the potential for large variations in rating periods used, it was considered important to specify a specific time frame. Thus, slight variations in wording were required. After completing treatment, respondents are asked to indicate how much change had occurred as a result of their participation in the *PTSR*. At follow-up, respondents were asked to rate the change since leaving the program

The full scale is reported to have very high internal consistency (. 90 to .94) which is consistent with the obtained Cronbach alpha in the current sample of .91. Test- retest reliability has been reported to be acceptable for the full scale (.71).

Measures of the Characteristics of the Community Milieu

Community-Oriented Program Environment Scale. This is a 40-item questionnaire (see Appendix P) that asks about a variety of characteristics found to vary among hospital wards (Moos, 1974). These characteristics include such constructs as degree of patient autonomy, degree of conflict, and practical problem focus. Questions are worded such that respondents answer "true" or "false" to each item. Moos reports that the profile stability of wards that have a consistent treatment philosophy is quite high over long periods of time. Internal consistency of the ten scales is reported by Moos as adequate, (.67 to .81). However, in the present sample, it was much lower (.19 to .34) and attempts at replicating the factor structure obtained by Moos were unsuccessful.

Community Experiences Interview. This was an open-ended interview that was created for this research in order to examine the potential impacts of the community on a given client. An interview format was selected in order to capture the richness of the clients' experiences. Examples of questions asked included: "Was there anything about yourself that you felt made it particularly easy/difficult to feel part of the community?" and "Was there anything in particular that happened to you during your stay that had a positive/negative impact on you?" This interview took place one or two days prior to discharge. Following the interview, the responses were coded by this author in terms of their positive or negative valence. All the responses to the 11 questions were coded on a scale of -2 to +2, resulting in possible scores range from -22 (indicating a very negative experience) to +22 (a very positive experience). Clients were assured that I would be the only person with access to their responses, thus, for reasons of confidentiality, it was not possible to have a second rater rate the interviews. Thus, the coding scheme could not be assessed in terms of inter-rater reliability. See Appendix Q for a copy of the interview questions and Appendix R for the coding scheme.

Measures of Client Characteristics

Personal History Questionnaire. A brief client history questionnaire was developed to collect information about demographics and co-morbid diagnoses, the age at which the

trauma occurred, the type of traumatic experienced, as well as other psychotherapeutic modalities attempted (in order to get a sense of the chronicity of the difficulties). This was aimed at eliminating the need to access confidential records in that the client would be supplying all the necessary information themselves. See Appendix S for copy of the questionnaire.

Investment Ratings. A potentially important contextual variable is the degree to which a client is invested in the program. This was assessed by prime nurse therapist for each client at discharge. In instances where there was more than one prime nurse assigned to an individual, the nurses arrived at a consensus rating. Scores were rated on a scale of one to ten, with ten representing the highest degree of motivation/investment in the program.

Implementation Measures

Finally, it is important to determine that program elements associated with particular objectives actually produced the desired effects. One way to determine this is to ascertain whether clients who attend more of activity X relative to their peers, experience more of the positive benefits associated with this activity (Posavac & Carey, 1992). Thus, it is important to have an accurate accounting of client attendance at various activities. The most non-obtrusive way of completing this task was to have clients complete a single page log once weekly during all the weeks they participated in the program. This checklist took approximately five minutes to complete. See Appendix T for a copy of this activity log.

Procedure

Clients were contacted by mail while waiting to attend the program. Potential participants were informed that their participation was voluntary and would not impact upon the length of their wait to get into the program. Copies of the letter of information and consent form are contained in Appendix U. Clients were requested to return the enclosed questionnaires in postage-return envelopes. Envelopes were returned care of a post office box to ensure anonymity and prevent clinical staff from becoming aware of who was and was not participating in the study. This was done in order to preserve the promise that participation in the study would not impact upon their admission or treatment in any way.

Attempts were made to have the interval between waitlist and pretest be consistent with the length of the treatment program, in order to demonstrate that changes do not typically occur over a six-week interval in the absence of some intervention.

Each week, all new admissions to the Health Centre met with this researcher and were provided with an overview of the research and a request for participation. At times some attendees had not yet heard about the research project because they were not contacted while on the waitlist. This occurred in instances of transfers from within the hospital or where clients were admitted sooner than had been anticipated. Attendance at the research orientation meeting was mandatory, but clients were informed that should they elect not to participate (or to discontinue their participation), they did so without implication. Time was allotted for clients to complete the questionnaires at this time. Typically clients were able to complete a package of questionnaires in 45 minutes to an hour. Questionnaires were returned directly to the researcher or via a locked box located on the unit. This box was not accessible by anyone other than the researcher. Participants were also given six weekly activity logs to complete over the course of the program. They were instructed to return the completed log each Friday to the locked box. Compliance was monitored and participants were reminded only once if there were outstanding materials. There was only a single reminder because it was felt that a client's failure to return materials could be interpreted as an indication that the he/she wished to withdraw their participation. This right was stipulated in the consent form (see Appendix U) and carefully adhered to.

The majority of the pretest measures were collected via the research-derived questionnaires with two exceptions. The *TSI* was routinely being collected as part of the hospital's assessment week procedures. Completion of this questionnaire was considered mandatory by treating personnel and hence most clients completed it. Permission was sought from participants to have the TSI scores provided. Also, as part of assessment week, clients met with one of two occupational therapists to articulate their objectives for the program. The goals were rated with the *COPM* and these ratings were later provided to this researcher. All other information was provided directly to the researcher.

In the week prior to discharge, an appointment was made with each participant to discuss his/her experiences of living in the community. The interviews typically lasted about thirty

minutes and were done face-to-face at Homewood. All interviews were conducted by this researcher and tape-recorded when permission was granted to do so. Twelve individuals refused to give permission for the interview to be taped. Notes were made and the interviews were generally coded within one week of the interview. The interviews were not transcribed or coded by another rater due to confidentiality issues.

Participants were given the package of posttest questionnaires approximately five days before their planned discharge, with the instruction to complete them and return them prior to discharge. Addresses were requested from participants in order to mail out the final package of questionnaires and the results of the study when available. Clients also met with the occupational therapist to rate their performance and satisfaction in attaining their personal goals.

At 3½ months post-discharge, clients who had completed measures at posttest were mailed the package of questionnaires with a reminder letter attached. They were requested to return it at their earliest convenience in the provided postage-return envelope. Participants were not contacted a second time as it is a participants right to withdraw from the study. Upon receipt of the questionnaires, a feedback letter was sent out to the respondents, outlining the goals of the research. In September of 1999, a more specific feedback letter (with results summarized) was sent to all participants who had requested it, regardless of whether or not they had returned follow-up questionnaires. Copies of the two different feedback letters are contained in Appendix U.

Not all measures were collected at each time period. Table 1 outlines the schedule of data collection.

Table 1.

Schedule of Data Collection.

Instrument	Waitlist	Pre	Post	F/up
Body Attitudes Questionnaire (BAQ)	x	x	x	x
Health Questionnaire	x	x	x	x
COPE Scale (Carver)	x	x	x	x
Cdn Occ.'l Performance Measure (*COPM*)		x	x	x
Modified PTSD Symptom Scale (MPSS)	x	x	x	x
Trauma Symptom Inventory (TSI)	x	x	x	x
Toronto Alexithymia Scale (TAS-20)	x	x	x	x
TSI Belief Scale (TSI Belief)	x	x	x	x
Beck Hopelessness Scale (BHS)	x	x	x	x
Post -Trauma Growth Inventory (PTGI)			x	x
Community Oriented Programs Environment Scale (COPES)			x	
Community Experiences Interview			x	
Personal History Questionnaire		x		
Activity Log	n/a	weekly		n/a

Issues Regarding the Research Design

In order to demonstrate causality (i.e., the impact of an intervention), it is considered ideal to randomly assign patients to groups. This could take the form of two treatments simultaneously pitted against one another, or the assignment of one group to treatment and the other to a waiting list control group (Campbell & Stanley, 1963). However, there are some situations in which it is neither feasible nor reasonable to randomly assign persons to different treatment groups. Sometimes it is not possible to have experimental control over who receives a treatment and who does not. There are also serious ethical considerations.

Given that the intended participants in this study are suffering from a chronic, debilitating disorder, denying them treatment would not be acceptable to standards of practice. That is, it would not be appropriate to knowingly give some persons less than optimal treatment in order to explore the effects of a preferred treatment.

In situations such as this, Campbell and Stanley have advised that quasi-experimental designs can be "patched up" in order to be able to make stronger assertions regarding causality. Starting with an inadequate pretest posttest design, specific features to control for various sources of invalidity can be added. The result is often "an inelegant accumulation of precautionary checks [that] approaches experimentation" (Campbell & Stanley, 1963, p.57). The Recurrent Institutional Cycle Design (RICD) was developed to capitalize on situations wherein some aspect of the institutional process is on some cycle - that is, new information is continually being presented to a new group of respondents. This design has been used quite successfully in a variety of institutional settings (Campbell & McCormack, 1957; Korabik, 1994) and combines the advantages of "longitudinal" and "cross-sectional" approaches. Because of the nature of the recurrent cycles, measurements can be made at various points in time when one group has already been exposed to the treatment while another has yet to be exposed. This creates a series of comparable control groups. In idealized form, the design is presented below.

Cohort A	X	O_1		
	- - - - - - - - - - - - - - -			
Cohort B		O_2	X	O_3

Note: "X"= treatment or intervention, "O" = observation
(Campbell & Stanley, 1963, p. 58)

For those in each cohort, their posttest scores can be compared to their pretest scores, in order to determine the effect of treatment. The next cohorts act as non-equivalent control groups. In order to control for effects of history, the pattern of pre-treatment to post-treatment scores of successive cohorts can be compared. If there are no significant

differences between non-overlapping cohorts, then both the threats of history and selection can be ruled out. The cross-sectional comparison of the O_1 with O_2 cannot be explained by the effects of history or testing. Mortality effects can be ruled out with the inclusion of a drop out analysis. The threat of instrumentation is unlikely in situations where the testing is done with standardized measures during the same time period. In order to discount an explanation of regression to the mean, a pre-treatment baseline as well as follow-up observation were added. Using the RICD, the data collection cycle is depicted in Figure 2.

Figure 2.

Recurrent Institutional Cycle Design

Cohort 1	WL	PRE	POST	F/UP			
Cohort 2		WL	PRE	POST	F/UP		
Cohort 3			WL	PRE	POST	F/UP	
Cohort 4				WL	PRE	POST	F/UP
Cohort 5					WL	PRE	POST.....
etc.....							

Note: WL = waitlist, Pre = pretest (admission), Post = posttest (discharge), F/up = follow-up

Results

A Note about the Statistical Analysis

A large number of statistical analyses were performed. The decision was made not to use a strict Bonferonni correction for two reasons. The first reason was pragmatic in the sense that different numbers of dependent variables and post-hoc comparisons were used depending on the analyses. It was felt that it would be confusing to the reader to have to keep track of the many different p values being used to test significance. The second consideration was to balance the concerns for inflated family-wise error (Type I errors) with concerns of failing to find significant differences where they do in fact exist (Type II errors). Given that the study is a program outcome evaluation, it was felt that it was important to detect meaningful changes where they might occur. Thus, the decision was made to use a stricter, $p < .01$ to test for significance for all MANOVAs and posthoc t-tests (for the outcome variables) rather than a liberal $p < .05$ level. This represents a compromise position between a strict Bonferonni correction and no correction at all and is an attempt to reduce some alpha errors while ensuring there is some power to detect differences. Regression analyses were tested for significance using a $p < .05$. This traditional alpha level was used to test hypotheses relating to the impact of contextual variables (perceptions of the community, community experiences, investment) because the hypotheses were considered exploratory. The intention was to minimize Type II statistical errors (i.e., to find differences that do exist).

Time Intervals

At the outset, the goal was to collect data at four points in time with consistent time periods between data points across the participants. Specifically, an attempt was made to have the baseline (pre-treatment) period reflect the length of the treatment, that is six weeks, and to have a four month follow-up. This was not always possible, particularly in the case of baseline data. Often clients were admitted more quickly than anticipated, resulting in a shorter interval between waitlist and pre-treatment. To accommodate these practical issues, it was decided to use a minimum baseline period of two weeks. This resulted in the elimination of seven waitlist questionnaires (but not the case as the rest of their data was used). The time

interval between waitlist and pre-treatment ranged from 14 to 90 days (M = 36.70, SD = 18.96). The average time between pretest and posttest was a little less variable, given that the typical length of stay is 6 weeks. However, there were numerous cases of extended stays (either because assessment week needed to be repeated and/or the program was extended for those attending over the Christmas holidays when there were no activities). It was less common to leave early although it did occur. Thus, the time interval between completion of pretest and posttest ranged from 31 to 57 days (M = 42.64, SD = 5.13). Finally, the time interval between posttest and return of follow-up questionnaires ranged between 118 and 190 days (M = 131.50, SD = 12.51).

Sample Size

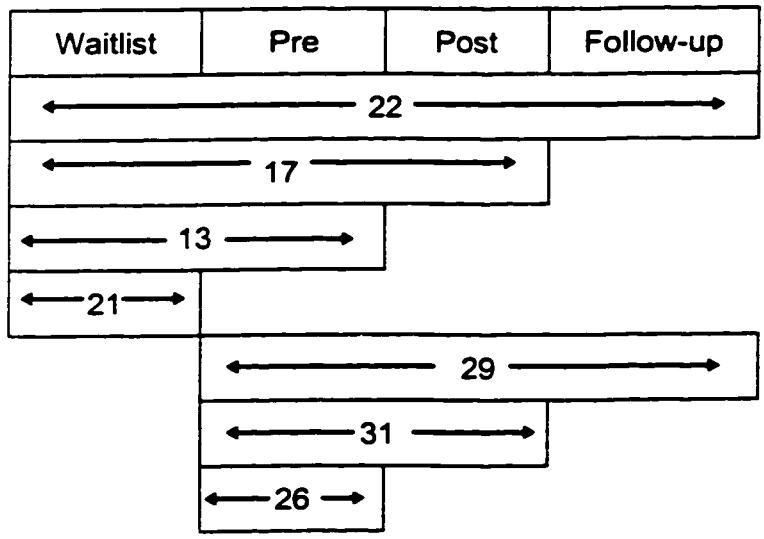
Data were collected at a minimum of one point in time on 157 individuals. In total, the number of questionnaires collected at waitlist was 73, with 138 collected at pretest, 99 post-program, and 51 at follow-up. Figure 3 depicts the total number of questionnaires collected at each time period as well as the numbers of individuals who contributed one, two, three, or fours sets of questionnaires. It is also evident from this figure that waitlist data was collected on approximately half of the sample.

Sample Characteristics

Demographic and personal history information was collected on all participants. In cases where pretest data was not collected, information about client's gender and age was obtained from intake records. Table 2 provides details of the study participants with respect to age, gender, psychiatric history and type of trauma experienced. It is noteworthy that this sample is a mixed gender sample, with a ratio of approximately five women to every one man. Often treatment samples are homogeneous with respect to gender, either by design (e.g. in the case of rape victims) or by natural occurrence (e.g, in the case of Vietnam veterans who are predominantly men). This sample is also quite varied with respect to age. Eighteen is the youngest that a client will be accepted into the program, and there were a few participants who were this young. There is no stated upper limit on the age that a client may be. Many participants in this study have commented on the "family atmosphere" that is created in the

Figure 3.

Participants Completing Questionnaires at Each of Four Time Periods



Totals	73	138	99	51

Note: Numbers spanning across more than one time period indicate that questionnaires were completed at those intervals. For example, 22 persons completed questionnaires at all 4 data collection points, while 17 completed waitlist, pre and post only.

community with such an age range all residing together. Given that the majority of participants report experiencing abuse as children, this atmosphere can have either positive or negative implications depending upon each client's individual issues.

Although 96% of participants have sufficient symptoms to warrant a diagnosis of PTSD, as many as one third of all clients arrive at the Health Centre never having previously been diagnosed with this disorder (Wright et al., 1996). This has important implications for out-patient services and suggests that perhaps PTSD is under-diagnosed in the community. As indicated, over three-quarters of participants had been previously hospitalized for psychiatric difficulties. Some of these admissions were previous stays in the PTSR, as 27 individuals reported that this was their second time in the program, with 3 attending for a third time.

However, details about previous admissions in other settings were not sought so it is not known whether significant PTSD symptomatology was or was not addressed in these previous admissions. Finally, the incidence of psychiatric co-morbidity in this sample illustrates the chronicity and severity of the impact of trauma on some individuals.

Table 2.

Characteristics of the Study Participants (N = 157)

Gender	128 Women, 29 Men
Mean Age	39.2 (range 18 to 58)
Employment	89 Employed, 29 Unemployed
Previous Psychiatric Admissions	78%
DSM-IV Diagnosis of PTSD	96%
Mean # Years Dealing with Trauma	14.2 (range 1 to 52)
Type of Trauma**	
Childhood abuse	95%
Abuse during adulthood	81%
Motor vehicle or other serious accident	32%
Victim of criminal act	37%
Witness to death or serious injury	32%
Work-related trauma	14%
Disaster (natural or manmade)	10%
Combat exposure	3%
Comorbid Psychiatric Difficulties**	
Depression	89%
Anxiety disorders	77%
Dissociation	73%
Bipolar Affective Disorder	22%
Eating Disorders	20%
Addictions	13%

* Criterion A was not assessed. ** Percentages total more than 100% as respondents could indicate multiple categories. Mean number of traumas reported was 3.09 (range 1 to 7).

The majority of participants were Caucasian with only two participants of African descent and three Native Canadian Inuit. The sample is also limited with respect to social-economic status. Two-thirds of participants were employed and the majority carried premium health-care insurance. This is the nature of the unit's population because it is a private health care facility.

As detailed in the Method section, clients were continually admitted on a weekly basis. For purposes of analysis, they were grouped in a series of overlapping cohorts who attended the program. In total there were seven cohorts that were approximately equal in number and did not differ with respect to age, $F(6) = .829$, $p = .55$, or gender ratios, $\chi^2(7) = 8.34$, $p = .30$. Table 3 details the number of participants and dropouts in each cohort. A participant was considered a dropout for the purposes of future analysis if they did not complete a questionnaire at discharge.

Table 3.

Sample Size for Each of Seven Cohorts

	Participants	Drop-outs*	Total
Cohort 1	12	8 (40%)	20
Cohort 2	12	6 (33%)	18
Cohort 3	15	7 (32%)	22
Cohort 4	18	5 (22%)	23
Cohort 5	18	10 (36%)	28
Cohort 6	13	3 (19%)	16
Cohort 7	10	4 (29%)	14
Total	99	43 (30%)	141*
Mean	14	6.1	20.14

* Note: Drop-outs defined as persons who did not complete posttest questionnaires. 16 participants were not assigned a cohort as they completed waitlist questionnaires only. Thus the total number of participants is 157.

Drop Out Analysis

As can be seen from Figure 3 and Table 3, there were a number of participants who became "drop-outs" from the study. In total, 60 individuals dropped out of the study between waitlist and posttest. Twenty-one participants completed questionnaires only while on the waitlist. Sixteen of these 21 did not attend the program, either because they canceled their admission (n= 5) or remained on the waitlist past the data collection cut-off (n=11). The remaining 39 "drop-outs" completed pretests but did complete posttests. These figures represent mortality rates of 28.7% from waitlist to pretest and 28.2% from pre- to posttest. Only six persons (10%) who dropped out of the study actually completed the six week program. Thus, the majority of study drop-outs did so because they left or did not attend the program. The rate of approximately one third of individuals failing to complete the program once they attend is consistent with observations made by PTSR clinicians over the years (Wright, personal communication, 1997).

Clients typically do not complete the program for three main reasons. As a matter of course, the first week of the program entails an assessment week wherein it is determined whether the client has the readiness to complete the remaining five weeks. In some instances it is determined by either program staff or the client themselves that the timing is not right to continue with the program. Reasons for such a decision could include an active addiction or eating disorder which would preclude the client from making good use of the program or an inability to maintain affective stability and safety. In the current sample, 22 individuals were discharged early on in the program because of such issues. In most cases, the recommendation was to attend another program for treatment of addiction or depression prior to completing the PTSR. In other instances, clients are asked to leave the program following a major violation of program rules. Examples include drug or alcohol use which is prohibited by a treatment agreement, sexual contact between community members, criminal or anti-social behaviour, and serious self-harm or suicidal acting out. In the present sample, ten individuals were forced to leave the program early for such violations. The final group of early discharges include persons who decide to leave the program for reasons which are not related to their progress. At times family emergencies, job considerations, or medical

conditions have required an individual to depart earlier than originally planned. This was the case in the remainder (n = 7) of the current sample of drop-outs.

Finally, another portion of the data was lost between posttest and follow-up. Only 51 of the 99 persons who completed posttest questionnaires returned their questionnaires at four-month follow-up. This represents a further mortality rate of 48.5 %. Although somewhat high, this is typical of studies that make use of mailed-in questionnaires.

Pearson's chi square test revealed that drop-outs were equally represented across the seven cohorts, χ^2 (7) = 2.44, p = .93. Next, the demographic and personal history variables were examined in both study participants and drop-outs to ensure that those who completed the posttests were representative of the entire sample. Independent samples t-tests were conducted on all interval data and revealed that the two groups were not significantly different with respect to age, previous psychiatric admissions, or number of years since dealing with their traumatic experiences, p > .10. Nominal data of self-reported psychiatric difficulties (yes/no) were tested using Pearson's chi square statistics. These analyses indicated comparable histories of PTSD symptoms, depression, suicidality, anxiety, dissociation, and addiction in both groups. However, dropouts were significantly more likely than participants to report histories of bipolar mood disorder, χ^2 (2) = 10.05, p = .001, and eating disorder, χ^2 (2) = 7.23, p = .007. Clients with psychotic symptoms may not have been able to manage well in the therapeutic milieu, perhaps accounting for their tendency to have to leave the program. Given that clients with active eating disorders were excluded from treatment after assessment week, this result is not surprising. Indeed, in some instances eating disordered clients were transferred directly to the Eating Disorders (ED) unit to receive treatment prior to working on their recovery from trauma, and three clients came into the *PTSR* following a stay on the ED unit. Personality functioning of study participants and drop-outs was examined using the subscales of the *Personality Assessment Inventory*. There were no significant differences between the two groups. Means and standard deviations of the PAI subscales are presented in Table 4. Finally, the pretest scores on all outcome variables were examined with respect to participants versus drop-outs. All comparisons were non-significant at the p > .10 level.

Table 4.

Personality Assessment Inventory Scores for Participants and Drop-outs

	Participants		Drop-outs	
Subscale	Mean	SD	Mean	SD
Aggression	51.1	12.8	55.8	15.7
Alcoholism	51.0	14.5	56.1	15.8
Anti-Social	54.4	11.0	58.8	12.6
Anxiety-Related Disorders	76.9	13.1	78.7	14.2
Borderline	73.6	8.7	76.8	9.8
Mania	52.3	11.6	57.9	15.2
Negative Impression Management	74.6	14.7	79.2	19.6
Negative Treatment Indicators	30.8	6.3	29.0	6.6
Paranoia	63.9	12.6	66.1	21.9
Positive Impression Management	39.0	9.6	35.4	9.8
Schizophrenia	71.6	13.8	77.2	17.6
Stress	65.3	11.8	66.6	11.9
Suicidality	79.7	17.5	80.5	21.4

Note: These scores are all standardized T-scores. N = 89 for participants, 29 for drop-outs. No comparisons were significantly different.

Analyses to Examine Threats to Internal Validity

The results of the above outlined drop-out analyses indicate that mortality was not a significant threat to the internal validity of the study. A series of other analyses were conducted to examine the threats of history and instrumentation (Campbell & Stanley, 1963; Cook & Campbell, 1979) with statistical controls used to deal with regression to the mean.

Possible effects of history were examined in two ways. First, a series of mixed within-between repeated measures MANOVAs were conducted using cohort as the between subjects variable, and the four time periods (waitlist, pre, post, and follow-up) as the within subjects variable. Thirteen MANOVAs were initially conducted, grouping the dependent variables in sets according to the objectives they measured. In all analyses, neither the main effects for cohort nor the cohort by time interactions were significant. These analyses were repeated using three time periods (pre, post, and follow-up) and then two time periods (waitlist-pre, pre-post, post-follow-up) as the repeated measures. These were necessary to ensure that there were no effects of cohort across any of the time intervals. In all cases, there were no significant main effects of cohort and or cohort by time interactions.

The second manner in which the possible effect of history was examined used the *Moos Community Oriented Programs Environment Scale* (Moos, 1974). Participants rated their perceptions of the therapeutic milieu on the 40-item scale by answering true or false to statements describing the structure and emotional climate of the unit. Analyses of variance on the 10 subscales of the Moos revealed that there were no significant differences between the seven cohorts with respect to their perceptions of the quality of relationships in the community (involvement, support, spontaneity); how the treatment program was delivered (autonomy, practical problem orientation, personal problem orientation, anger); or how the system was maintained (order, clarity, staff control). This is not to say that there were not substantial individual variations in perception, just that the climate of the community did not vary as a function of the cohort. Given these two sets of null results for cohort, it seemed reasonable to conclude that the different cohorts could be collapsed. Thus, all other analyses were conducted without regard to cohort.

Instrumentation was also a possible threat in the sense that some participants completed more sets of questionnaires than others. Thus, the follow-up and posttest scores of those who completed a waitlist as well as a pretest questionnaire were compared with those who had only completed a pretest. Between groups ANOVAs were conducted separately for each of the 25 outcome variables. All results were non-significant. Similarly, the pretest scores of those with and without waitlist data were compared using between groups ANOVAs. Again,

there were no significant differences between the groups. Therefore, there appear to be no significant effects due to multiple responding.

Stability of Scores between Waitlist and Pretest

The stability of scores between waitlist and pretest was examined with a series of repeated measures MANOVAs that were organized by treatment objective. It should be noted that five of the outcome measures were not collected at baseline. Four of these were ratings made on the *COPM* which was a clinician administered interview. The fifth was *the Post-Trauma Growth Inventory* which was only collected at posttest and follow-up. Thus, 11 repeated measures MANOVAs were conducted. Seven MANOVA's were non-significant ($p > .01$) while the remaining four were significant. This necessitated post-hoc paired samples t-tests to determine which dependent variables were accounting for the changes, as well as the direction of the change. Table 5 contains the results of the repeated measures analyses (on the first line) and post hoc tests for the individual dependent variables where appropriate. The means of all the outcome variables are presented in Table 8. To examine the means of waitlist and pre-test, review columns 1 and 2 of this table

Examination of Table 5 reveals that 17 of the 21 dependent variables had stable baselines (keeping in mind that some objectives were measured with 2 or three dependent variables and a single non-significant MANOVA would be interpreted to mean that all measures of an outcome had stable baselines). The notable exceptions were PTSD severity scores and relationship beliefs. With respect to PTSD severity scores, for all three symptoms clusters, means were significantly higher at pretest than waitlist indicating increased severity of symptoms at program entry. Specifically, means at waitlist for clusters B, C, and D were 7.84, 10.47, and 7.55, respectively, whereas these same scores were 11.08, 14.68, and 10.88, at pretest. This increase in severity of symptoms may reflect clients' increasing despair while waiting to attend treatment. In other words, once a decision has been made to attend the program (which is a six week time commitment), it may be that a client's PTSD symptoms become more salient to them as they await treatment. In the case of the relationship belief measure, scores improved from waitlist to pretest, indicating an increased trust, intimacy,

and esteem in others ($M_{waitlist}$ = 117.1 vs. M_{pre} = 108.4). Higher scores reflect more distorted beliefs. Given that program participants are aware of the importance attributed to the

Table 5.

Repeated Measures Analysis of Variance and Post-hoc tests for Significance for Waitlist to Pretest

Outcome		Within Subjects Effect of Time	
	N	F/ t	p
Objective 1: Body Awareness & Esteem	41	4.89	.033
Objective 2: Coping	48	1.61	.210
Objective 3: Self-care	n/a		
Objective 4: Safety	50	2.61	.021
Objective 5: PTSD B (Intrusive)	48	9.34	.004
Frequency	49	.51	.612
Severity	48	-5.02	<.001*
Objective 6: PTSD C (Avoidant)	47	12.12	.001*
Frequency	49	-.55	.586
Severity	47	-4.49	<.001*
Objective 7: PTSD D (Hyperarousal)	47	7.91	.007*
Frequency	48	1.23	.224
Severity	47	-4.61	<.001*
Objective 8: Other Symptoms	47	6.53	.044
Objective 9: Emotional Expression	51	.95	.335
Objective 10: Relationships (beliefs)	51	14.73	<.001*
Objective 11: Beliefs re Self	51	3.13	.083
Objective 12: Hope	47	.20	.656
Objective 13: Spirituality/Growth	n/a		

community milieu, this improvement in scores may reflect clients' alterations in view in order to make better use of the community. This lack of a stable baseline on these two measures must be kept mind when interpreting possible treatment effects.

Treatment Effects

Treatment effects were first examined by using repeated measures MANOVAs with three time periods (pre, post and follow-up). As in the case of the waitlist to pretest MANOVAs, effects were first examined by clustering dependent variables according to which objective they assessed. The 13 MANOVAs were all significant. Subsequent ANOVAs on the 25 dependent variables (see Table 6) revealed that all but two were significant. Thus, there was a significant effect over time for every treatment outcome with the exception of somatisation and beliefs regarding others. As noted above, relationship beliefs did not have a stable baseline in that clients showed improvements between waitlist and their entry into to the program. The significant ANOVAs were followed with post hoc paired samples t-tests to determine during which time periods the clients made significant shifts (see Table 7).

Table 6.

Repeated Measures Analysis of Variance for Pre/Post /Follow-up

Outcome	Within Subjects Effect of Time		
	N	F	p
Objective 1: Body Awareness and Body Shame			
Body Awareness	50	4.21	.014
Body Shame	49	10.53	<.001
Somatisation	45	3.00	.055
Objective 2: Coping			
Coping - Active	49	5.36	.006
Coping - Emotion Focused	49	7.72	.001
Coping - Disengagement	49	13.39	<.001
Objective 3: Self-Care			
Self Care Goals (*COPM* ratings)	33	18.99	<.001
Objective 4: Safety			
Safety - self	50	9.58	<.001
Safety (*COPM* ratings)	33	4.54	.014
Objective 5: PTSD:B (Intrusive Symptoms)			
Frequency	50	10.27	<.001
Severity	49	15.04	<.001
Objective 6: PTSD: C (Avoidant Symptoms)			
Frequency	49	20.70	<.001
Severity	48	12.24	<.001
Objective 7: PTSD: D (Hyperarousal Symptoms)			
Frequency	48	18.86	<.001
Severity	47	16.22	<.001
Objective 8: Other Symptoms			
Generalized Traumatic Distress	35	11.12	<.001
Self-Regulation	43	3.88	.014

Table 6. (cont'd)

Outcome	Within Subjects Effect of Time		
	N	F	p
Objective 9: Emotional Expression			
Alexithymia	49	23.12	<.001
Feelings Goals (*COPM* ratings)	27	28.32	<.001
Objective 10: Relationships			
Beliefs re Others	50	.90	.409
Relationship Goals (*COPM* ratings)	22	16.71	<.001
Objective 11: Beliefs re Self	50	16.40	<.001
Objective 12: Hope	50	11.52	<.001
Objective 13: Spirituality/Meaning			
Spirituality Goals (*COPM* ratings)	20	19.36	<.001

Table 7.

Tests of Significance of Outcomes at 3 Time Intervals

	Pre - Post			Post - Followup			Pre - Followup		
	t	df	p	t	df	p	t	df	p
Objective 1: Body Awareness & Esteem									
Body Shame	-5.07	95	<.001	.69	49	.495	-3.15	49	.003
Body Awareness	-2.27	95	.014	-1.75	50	.086	-2.56	50	.013
Objective 2: Coping									
Coping - Active	-5.24	94	<.001	1.77	49	.083	-1.38	50	.905
Coping - Emotion Focused	-3.49	95	.001	-1.03	50	.306	-3.19	50	.012
Coping - Disengagement	5.81	94	<.001	.08	49	.934	4.64	50	<.001
Objective 3: Self-care									
Self Care Objectives	-8.99	70	<.001	2.10	33	.043	-3.57	33	.001
Objective 4: Safety									
Safety - self	1.24	93	.218	3.31	50	.002	3.51	50	.001
Safety (COPM Ratings)	5.42	86	<.001	-.70	33	.491	1.89	34	.067
Objective 5: PTSD:B (Intrusive Symptoms)									
Frequency	3.46	93	.001	2.09	50	.042	4.34	50	<.001
Severity	4.85	92	<.001	1.35	50	.183	4.91	49	<.001
Objective 6: PTSD:C (Avoidant Symptoms)									
Frequency	7.06	93	<.001	-.84	49	.408	4.80	49	<.001
Severity	6.40	89	<.001	-.99	49	.327	3.54	48	.001

Objective 7: PTSD:D (Hyperarousal Symptoms)									
Frequency	7.45	92	<.001	.08	48	.939	5.09	49	<.001
Severity	7.10	90	<.001	.69	48	.491	4.35	48	<.001
Objective 8: Other Symptoms									
Generalized Traumatic Distress	5.72	84	<.001	.95	40	.350	3.63	35	.001
Self-Regulation	4.68	84	<.001	.09	49	.927	2.45	43	.014
Objective 9: Identify and Express Emotion									
Alexithymia	5.64	94	<.001	-3.05	49	.004	-6.31	50	<.001
Feeling Goals	-10.69	54	<.001	2.04	27	.051	-4.64	27	.0001
Objective 10: Relationships (COPM Goals)	-11.19	62	<.001	.30	23	.767	-3.94	22	.001
Objective 11: Beliefs - Self	5.59	94	<.001	1.92	50	.061	4.93	50	<.001
Objective 12: Hope	6.25	90	<.001	-2.84	50	.006	2.09	50	.042
Objective 13: Spirituality/Meaning									
Post-Traumatic Growth		n/a		2.90	47	.006		n/a	
Spirituality Goals	-5.74	27	<.001	1.23	20	.253	-4.30	20	<.001

Overall, it can be concluded that for 12 of the 13 objectives examined for the period pre- to post- treatment, at least some improvements are noted. Typically, the improvements that are noted within the pre- to post-treatment period are then maintained at four-month follow-up. What follows is a objective by objective analysis of each of the 25 outcome variables.

Objective 1: Body awareness and body esteem. In the case of body awareness and esteem, improvements were noted in two of the three dependent measures. As mentioned above, there was no significant effect of time for the three-time interval pre to post to follow-up for somatisation as measured with the *Personality Assessment Inventory* ($p = .055$). Thus, it was not examined further. For both body awareness and body shame, which were measured with the *Body Attitudes Questionnaire*, the pattern of results was identical. Following a stable baseline, improvements were noted between pre- and post-treatment which were maintained at follow-up. This is indicated by the lack of change post to follow-up and the significant F test for the pre to follow-up comparisons. The means and standard deviations for each time period are presented in Table 8. Higher scores reflect greater body awareness and esteem.

Objective 2: Coping. All three coping factors (as derived from the *COPE* by Carver et al., 1989) had stable baselines. Therefore, there were no changes in respondents' tendency to use active coping, to use emotion-focused coping or to disengage rather than cope during the waitlist period. Improvements were noted for all three types of coping pre- to posttest. There was an increase in the adaptive coping methods (active and emotion-focused) and a decrease in the maladaptive coping method, disengagement. Mean scores out of a possible range of 0 to 16 and are presented in Table 8. In the case of active and emotion-focused coping, higher scores reflect better coping, while the converse is true for disengagement coping. Gains in active coping were not maintained at follow-up, but they were in the case of the other two styles of coping.

Objective 3: Self-care. The single measure of this objective was the self-care goals as generated by participants via the *COPM*. Given that each client could generate their own goals, many did not specifically state self-care goals. Only 70 of the 99 participants had self-care goals, despite it being a stated objective of the program. There was no baseline data collected on this measure. Means for the other three time periods are presented in Table 8..

Table 8.

Means and Standard Deviations of Outcome Measures.

	Waitlist M (SD)	Pretest M (SD)	Posttest M (SD)	Follow-up M (SD)
Objective 1: Body Awareness & Esteem				
Body Awareness	37.2 (5.8)	37.7[a] (5.1)	38.8[b] (5.6)	39.3[b] (5.6)
Body Shame	16.6 (4.4)	17.0[a] (4.9)	20.0[b] (4.7)	19.5[b] (6.3)
Somatization	60.3 (13.3)	69.3 (13.1)	62.9 (14.5)	63.2 (16.4)
Objective 2: Coping				
Coping: Active	9.3 (2.2)	9.5[a] (1.7)	10.3[b] (1.8)	9.9[ab] (2.3)
Coping: Emotion-Foc	8.3 (2.7)	8.4[a] (2.8)	9.3[b] (2.8)	9.1[b] (2.8)
Coping: Disengage	9.6 (2.2)	8.9[a] (2.0)	8.0[b] (1.9)	7.8[b] (2.0)
Objective 3: Self-care				
Self-Care	n/a	3.7[a] (1.8)	6.1[b] (1.9)	5.3[b] (2.5)
Objective 4: Safety				
Safety: self belief	32.0 (9.1)	32.5[a] (8.9)	30.7[a] (8.2)	27.7[b] (10.8)
Safety (COPM)	n/a	5.6[a] (2.3)	7.2[b] (1.9)	6.7[ab] (3.0)
Objective 5: PTSD B (Intrusive)				
PTSD:B Frequency	8.3 (3.8)	8.7[a] (3.4)	7.4[b] (3.8)	6.5[b] (4.3)
PTSD: B Severity	7.8 (4.2)	12.5 [a] (5.4)	9.9[b] (5.6)	8.9[b] (6.0)
Objective 6: PTSD C (Avoidant)				
PTSD: C Frequency	14.3 (4.3)	14.0[a] (4.4)	10.2[b] (4.9)	10.7 [b] (5.7)
PTSD: C Severity	10.4 (5.5)	16.1[a] (6.3)	11.5[b] (6.7)	11.6 [b] (7.6)
Objective 7: PTSD D (Hyperarousal)				
PTSD: D Frequency	10.5 (2.5)	10.1[a] (3.2)	7.9[b] (3.3)	7.8[b] (4.0)
PTSD: D Severity	7.5 (4.1)	11.5[a] (5.0)	8.5[b] (4.9)	7.8[b] (5.1)
Objective 8: Other Symptoms				
Gen. Tr. Distress	71.5 (6.2)	68.1[a] (6.9)	63.2 [b] (8.2)	61.4 [b] (10.3)
Self -Regulation	64.7(12.8)	63.8[a] (12.9)	56.6[b] (11.6)	55.9[b] (11.5)

* Numbers with different letter superscripts represent means that significantly different from one another

Table 8 (cont'd)

	Waitlist	Pretest	Posttest	Follow-up
Objective 9: Emotonal Expression				
Alexithymia	68.8 (9.5)	70.9[a] (10.2)	64.3[b] (10.4)	60.1 [c] (13.5)
Feelings goals	n/a	3.2[a] (1.9)	6.5[b] (2.0)	5.8 [b] (2.7)
Objective 10: Beliefs re Others				
Other Beliefs	117.1 (21.8)	108.4a (20.3)	105.6 [b] (20.3)	102.9 [b] (28.0)
Relationship goals	n/a	3.4[a] (1.9)	6.4 [b] (2.0)	6.2 [b] (2.3)
Objective 11: Beliefs re Self				
Self Beliefs	125.0 (23.5)	121.7[a] (22.9)	109.0[b] (21.4)	103.3 [b] (30.6)
Objective 12: Hope				
Hopelessness	10.8 (5.7)	11.0[a] (6.1)	7.4[b] (5.8)	9.6[ac] (6.8)
Objective 13: Spirituality/Growth				
PTGI	n/a	n/a	59.3 (20.1)	

* Numbers with different letter superscripts represent means that significantly different from one another

The paired samples t-tests revealed significant improvements in clients' performance on self-care goals post-treatment relative to pre-treatment. This improvement was maintained at follow-up. Clients also reported a high degree of satisfaction with meeting these goals in that satisfaction scores also increased in a similar manner

Objective 4: Safety. Two measures of safety were used to attempt to address this core concept of the program. Beliefs regarding personal safety were measured by the TSI Belief Scale with higher scores reflecting more distorted beliefs (see Table 8). These scores remained unchanged during the baseline period, and were not improved immediately with treatment as indicated in the ratings from pre to post. However, these ratings had improved at follow-up, indicating a "sleeper effect" with respect to this variable. When completing the

follow-up, indicating a "sleeper effect" with respect to this variable. When completing the *COPM*, each client rated their ability to maintain safety at pre, post, and follow-up. The reported means on the ten-point scale are also presented in Table 8. Significance tests revealed that these ratings improved with treatment but dropped somewhat at follow-up resulting in non-significant results for the pre-follow-up comparisons ($p = .067$).

Objective 5: PTSD B (Intrusive symptoms), Objective 6: PTSD C (Avoidant symptoms), Objective 7: PTSD (Hyperarousal symptoms). On the *Modified Post-traumatic Stress Survey*, frequency scores for all three symptoms clusters followed the hypothesized pattern (see Table 8 for mean and standard deviations). Scores were unchanged during the baseline, improved (i.e., decreased) with treatment, continued to decrease and were maintained at follow-up. The means for each time period are plotted in Figure 4. The pattern was much different for severity scores. As mentioned above, severity scores increased during the baseline period and were significantly reduced with the program. These gains were maintained at follow-up but it is important to note that the apparent decrease in scores only placed participants at the level experienced during the baseline period. Figure 5 depicts this pattern graphically.

Figure 4.

PTSD Frequency at 4 points in Time

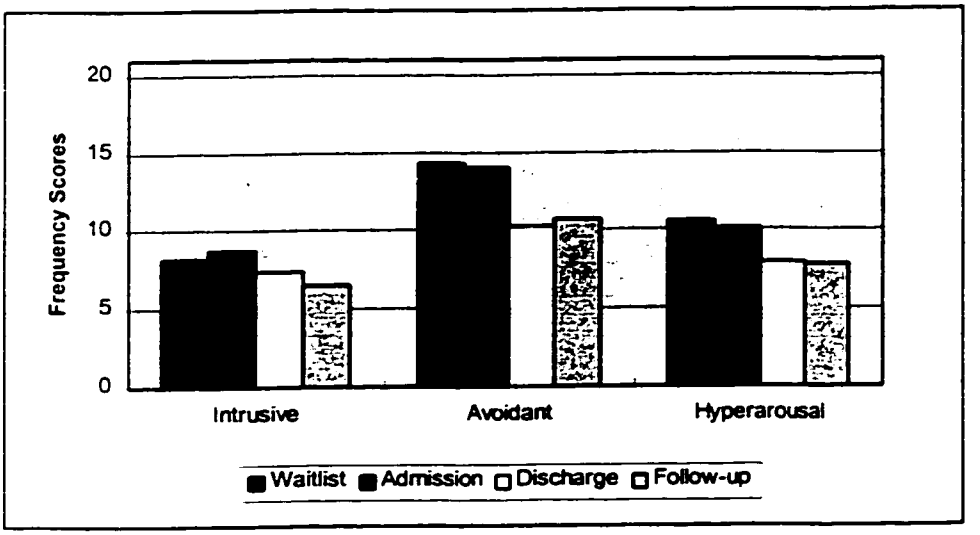
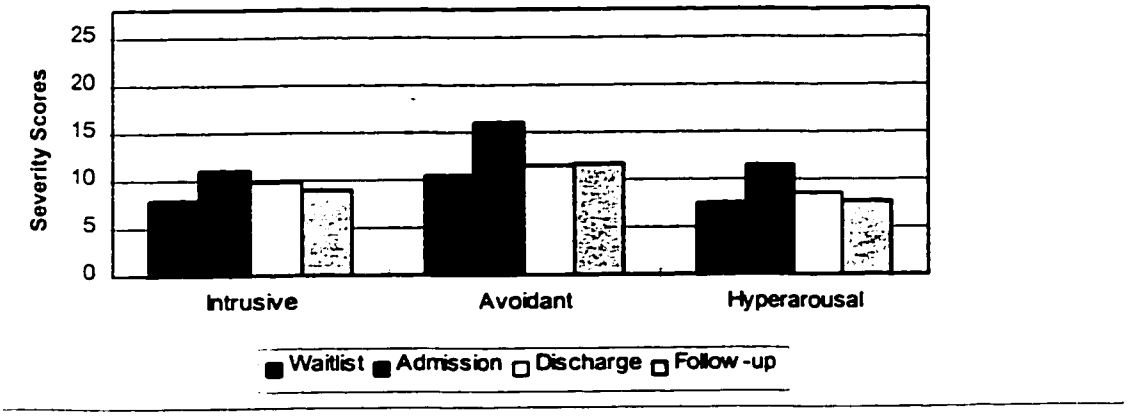


Figure 5.

PTSD Severity at 4 Points in Time



Objective 8: Other symptoms. The two dependent variables used to assess this objective were factors derived from the *Trauma Symptom Inventory*. "Generalized Traumatic Distress" is made up of a number of subscales, specifically those measuring core PTSD symptoms as well as generalized anxiety, depression, dissociation, and impaired self reference. In short, it is a measure of trauma-related dysphoria. The results of the t-test comparisons revealed that clients' frequency scores on this factor decreased significantly with treatment, continued to decrease and remained low at follow-up. As a group, the clients' mean scores decreased over one standard deviation (from 71.5 at baseline to 61.4 at follow-up, SD = 6.3). Scores below 70 are considered below the "clinical range". Clearly the program had a statistically and clinically significant impact on the frequency of trauma-related symptoms outside of the core PTSD clusters. Similarly, clients' ability to "self regulate" their affect as measured in declining tendencies toward suicidality and other self-injurious behaviours was also impacted positively with the program. Reported frequencies of these behaviours were significantly decreased at posttest and remained low at follow-up. Means and standard deviations for all four time periods are presented in Table 8.

Objective 9: Emotional expression. Scores on the *Toronto Alexithymia Scale (TAS-20)* also followed the hypothesized pattern in that they were stable at baseline, improved pre- to post- treatment and remained low at follow-up. Feelings goals as rated with the *COPM* were only obtained at pre, post, and follow-up. As indicated in Table 7, the pre-follow-up comparisons are significant, suggesting that clients who set goals related to the expression of emotion (n = 54) were successful in meeting their goals.

Objective 10: Relationships. As indicated in Table 8 respondents' ratings on the *TSI Belief Scale* relationships with others subscales (esteem, intimacy, trust, control) did not change between pretest and follow-up. Beliefs were less distorted at pretest than during the waitlist period, making any conclusions about the meaning of lack of treatment improvements tenuous at best. Secondly, relationship goals were identified by 62 participants on the *COPM*. Mean ratings across the three time intervals measured revealed significant improvements with treatment. These improvements were maintained at four-month follow-up.

Objective 11: Self beliefs. The *TSI Belief Scale* was also used to measure beliefs about the self (esteem, trust, intimacy, control). In contrast to beliefs about others, scores on this subscale did follow the hypothesized pattern. Higher scores reflect more distorted beliefs. Examination of Table 8 reveals that post-treatment scores were significantly better than pre-treatment scores and gains were maintained at follow-up. Thus, clients reported increased self-esteem, trust in their judgment, control over their actions, and increased self knowledge (intimacy).

Objective 12: Hope. *The Beck Hopelessness Scale* was used to assess the objective of enhancing hope. Higher scores indicate a higher degree of hopelessness. Following a stable baseline, client's scores did drop significantly by posttest (see Table 8). However, these gains were not maintained at follow-up in that mean scores rose to 9.6 (SD = 6.8).

Objective 13: Spirituality/Meaning. Data on the *Post Trauma Growth Inventory (PTGI)* were only collected at post and follow-up. Although treatment changes cannot be inferred from comparison of pre-treatment with post-treatment scores, the instructions on the *PTGI* requested that respondents consider positive changes made as a result of their involvement with the *PTSR*. The scores ranged from 3 to 105 out of a possible 110, with a mean of 59.3 (SD = 20.9). This obtained mean is difficult to interpret in that this measure has not been normed on a clinical sample nor with persons who have experienced a traumatic event that would meet the severity of stressor Criterion A for DSM-IV. At best, it can be concluded that participants experienced some positive growth as a result of completing the *Program for Traumatic Stress Recovery*.

The second manner in which spirituality objectives were assessed was with goals generated by the *COPM*. Only 27 participants articulated goals which were classified as "spirituality/ meaning", with only 20 respondents at follow-up. Despite this low N, the MANOVA examining the effect of time between pre, post and follow-up did indicate significant effects (see Table 7). Examination of the means revealed that the hypothesized pattern was again met. Thus, performance on this objective improved with treatment and the gains were maintained.

Magnitude of Effect and Clinical Significance

Effect size. Subsequent to determining whether the treatment changes are statistically significant, it is also important to determine the magnitude of these effects. This was done with the present data set using the standard formula of the difference between the pre- and post-treatment means divided by the pooled standard deviations of the sample. This ratio is known as delta or "d". The effect sizes for all significant post-treatment effects are presented in Table 9.

Table 9.

Magnitude of Treatment Effects and Clinical Significance

Outcome Variable	d	Clinical Significance (% of clients meeting a criterion of gain)
Body Awareness	.27	2%
Body Shame	.44	5%
Emotion-Focused Coping	.49	not assessed
Disengagement Coping	.50	not assessed
Self Care	.96	52%
Safety -self	.38	29%
Safety -COPM ratings	.41	38%
Intrusive Sx Frequency	.51	-
Avoidant Sx Frequency	.54	-
Hyperarousal Sx Frequency	.58	-
Frequency		90%
Generalized Traumatic Distress	.76	23%
Self- regulation	.65	51%
Alexithymia	.83	66%
Feeling goals	1.10	65%
Relationship goals	1.44	66%
Self Beliefs	.71	28%
Spirituality Goals	1.32	52%

Clinical significance. As outlined in the Introduction, Jacobson and his colleagues (Jacobson & Truax, 1991; Jacobson et al., 1999) have suggested that clinical significance be operationalized in three different ways. They further suggested that the appropriate operationalization could depend upon whether clinical and non-clinical norms are available for a given measure. In the present research, I have made use of two of their means of operationalizing clinical significance and used a third criterion as suggested by the authors of the particular measure being used.

With respect to the measures of body awareness and body esteem, no norms are available because this instrument was developed for the present research. Thus, I was limited to using Definition A as the measure of clinical significance. Post-treatment scores were deemed clinically significant only if they exceeded two standard deviations from the mean of the presumed dysfunctional group (my sample). This yielded rates of clinically significant improvement of only 2% and 5% for body awareness and body esteem respectively. With respect to outcomes of the goals generated by the clients on the *COPM*, I used the definition of clinical significance developed by its authors (Law et. al, 1991). The standard they proposed was that changes of 2 points or greater were clinically significant. Using this standard, the proportions of improved clients ranged between 28% for spirituality goals to 66% for relationship goals. For details see Table 9. Finally, I elected to use Definition B for the remaining measures. This entailed determining the percentage of post-treatment scores that were within two standard deviations of the mean of the normal (non-clinical) population. As reported in Table 9, rates of clinically significant improvement ranged from 28% to 90%. It should be noted that the three clusters of PTSD symptoms could not be examined individually with respect to clinical significance as a cut-off score was only available for frequency of the entire scale.

Process Evaluation

Once it had been demonstrated that the majority of the objectives of the program had been met, the next step was to determine whether the program function model underlying the program was correct as stipulated. This involved examining whether participating in the

activities that were believed to be associated with each objective actually led to the improvements noted. This model was presented and discussed earlier as Figure 1.

Clients' participation in each activity was assessed by their activity logs completed on a weekly basis. In all, 119 participants returned at least some logs ($M = 3.1$). In cases where fewer than three of the six logs were returned, the data were not used. In cases where only three to five logs were returned, the time was pro-rated to reflect the entire length of the admission. Thus, a total of 77 persons contributed data to the process evaluation. Independent samples t-tests revealed that the investment scores did not differ between those who returned activity logs and those who did not, $t(1, 42) = .69$, $p = .46$. There were also no significant differences in post-treatment scores between these same two groups, indicating that this subset of data is representative of the group of program participants. The t-test statistics for these comparisons are contained in Appendix W

Furthermore, the reliability of the logs was assessed by examining independent attendance records kept by some of the therapists. A random sample of eight different weeks from throughout the data collection period was reviewed. This analysis revealed that clients were 92.6% accurate in their reporting of their attendance, with a tendency to under-report rather than over-report. Therefore, these logs appear to be a reliable measure of program participation.

The model was examined via a series of regression analyses predicting posttest scores based on the amount of time spent in the various types of activities. For parsimony the activities were placed into 8 categories, 4 deemed core to the program and 4 deemed less central (non-core). See Figure 1 (Appendix B). The regression analyses were hierarchical. In the first step, the pretest scores were entered. In the second block the number of hours spent in objective-relevant core activities was entered, followed by the number of hours spent in objective-relevant non-core activities in the third block. Separate regressions were carried out for the 24 dependent variables.

Table 10 outlines the core activities that significantly predicted differential outcomes. A "+" sign in the column indicates that time spent in this category of activities did significantly predict the outcome. In other words, the more time spent in an activity, the greater the improvement. There were no instances of significant predictions where a relationship was

Table 10.

Core Activities as Predictors of Differential Outcome

		Activity Type			
Objective	Outcome	Body Awareness	Didactic & Skills	Process-Oriented	Community Building
1	Body Awareness		[redacted]		
	Body Shame	+	[redacted]		
	Somatization		+		
2	Active Coping				
	Emotion-Foc. Coping				
	Disengagement Coping	+	+		
3	Self-care Goals	+		+	+
4	Safety (COPM)				+
5	Frequency Intrusive Sx				[redacted]
	Severity Intrusive Sx			+	[redacted]
6	Frequency Avoidant Sx			+	[redacted]
	Severity Avoidant Sx			+	[redacted]
7	Freqency Hyperarousal			+	
	Severity Hyperarousal				
8	Gen. Traumatic Distress		+	+	
	Self-Regulation				
9	Alexithymia				[redacted]
	Feeling Goals		+		[redacted]
10	Beliefs -Others			+	[redacted]
	Relationship Goals	+			
11	Beliefs -self	+		+	[redacted]
12	Hope			+	
13	Post-trauma Growth				

not hypothesized. When a relationship was not predicted, these squares are marked with gray shading. Due to a small n, spirituality goals were not analyzed with respect to these hypotheses. The detailed regression analyses for each outcome are contained in Appendix X. Tables 14a through 14x provide the percentage variance accounted for at each step in the analyses, the beta weights, and significance values for each of the 24 regression analyses.

Examination of the columns and rows in Table 10 reveals that much of the program logic model (see Appendix B) as specified was not confirmed. With respect to participation in core activities, overall there are 22 significant results out of the 87 expected. With an alpha level of p = .05, this means that it is likely that four or five of these results occurred by chance. Furthermore, the results that are significant are not always the most intuitive. For instance, across the three measures of increased body awareness and esteem, participation in the body awareness activities only predicted outcomes in the domain of body shame, but not body awareness or somatisation. There were, however, no significant treatment effects in somatization. Therefore it would not be expected that participation in these activities would be predictive of outcome. Given that the *BAQ* as an outcome measure was explicitly developed to reflect program content, it is surprising that the amount of time spent in body awareness activities was not related to enhanced body awareness. Similarly it is problematic that time spent in skill-based training predicted so few outcomes; most notably it failed to predict changes in coping skills. The aspects of the program logic model that seem most adequately specified are those related to self-care as three of the four types of core activities significantly predicted changes in self-care objectives. Also, it would seem that of the four types of core activities, the process-oriented activities are most often related to improvements in functioning. The time spent in these activities is predictive of 11 of the 24 dependent, variables whereas body awareness activities are predictive of only five outcomes, didactic and skill building of four, and in the case of community activities only two.

The anticipated pattern linking activities to objectives was even less often confirmed in the analysis of "non-core" (expressive arts therapies, leisure activities, spirituality, and individual interventions) activities. A table was not constructed because so few of the predicted relationships between activities and outcome were significant. In total only 5 of 24 regression analyses yielded any significant results. Specifically, decreased body shame was

significantly related to time spent in spirituality-related activities; enhanced sense of safety with self and improved beliefs regarding oneself were both related to time spent in leisure activities; frequency of avoidant symptoms was related to time spent in expressive arts therapies; and severity of avoidant symptoms was related to time spent in individual interventions. As 69 hypotheses were tested, it is possible that three or more of these significant regressions occurred due to chance. Taken together, 27 significant predictions out of an expected 156 is not strong support for the accuracy of the underlying program logic model.

The Effects of Program Climate and Context

As indicated in the above review of "core" activities, despite predictions to the contrary, participation in community-building activities (i.e. community meetings, community parties, and community walks) was not significantly related to improvements in outcomes with the exception of self safety and self care. Thus, it may be that the key factor underlying the program's success is not participation in the community, but rather how therapeutic the community is perceived to be. To examine this hypothesis, the Moos *COPES* and the *Community Experiences Interview* were used.

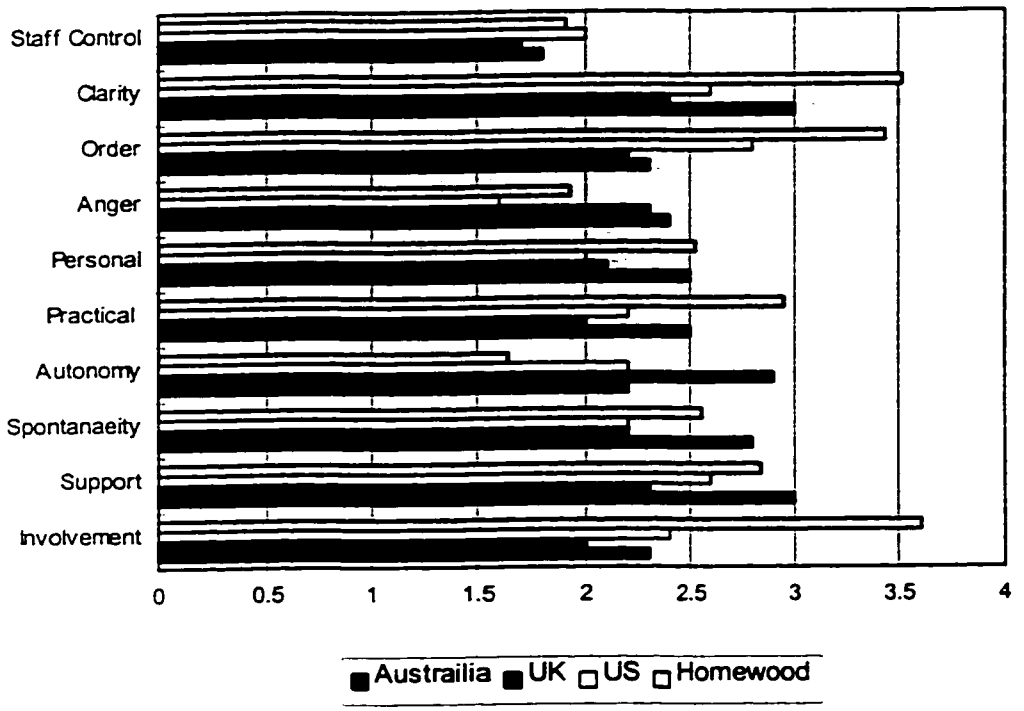
The Moos Community Oriented Programs Environment Scale. As discussed earlier, the *Moos Community Oriented Programs Environment Scale (COPES)* was administered to clients near the completion their stay. Figure 6 depicts the mean ratings for each of the ten subscales for the Homewood PTSR community with three other comparison groups. The data provided for the United States and the United Kingdom are derived from those presented by Moos (1974) and constitute the normative data that he collected when he was developing the COPES. It is based on several different communities for each country. The Australian data is derived from data presented by Manning (1989). He reported on a six long-term therapeutic communities for psychiatric patients. As both Moos (1974) and Manning (1989) used the 10-item scales, the means were adjusted to be comparable to the 4-item scales that were used in the present sample.

With respect to the Homewood sample, client ratings are generally high for dimensions considered to be positive and lower for less desirable aspects. On the three subscales that

Moos (1974) terms the "relationship dimension", clients give the program generally high marks for involvement and support with moderate ratings for spontaneity. All three of these dimensions are considered desirable in a therapeutic milieu. With respect to subscales related to treatment, clients report that both personal and practical problems are dealt with. They also report that a moderate degree of anger is expressed in the community and there is a low degree of client autonomy, both of which are negative indicators. Finally, with respect to what Moos terms "system dimensions", clients report that the program is generally well-organized as reflected in the high order and clarity scores. Despite low autonomy ratings, clients do not report an excessive amount of staff control (a negative indicator). These ratings are consistent with what the clinicians at the *PTSR* would describe as the nature of their program. Also, relative to the data presented for other therapeutic milieus, it is evident that the Homewood community is viewed quite favorably, except that PTSR clients perceive themselves as having less autonomy than is typical in other settings.

Figure 6 .

Mean Ratings for Subscales of the *Community Oriented Programs Environment Scale* in Four Different Treatment Samples



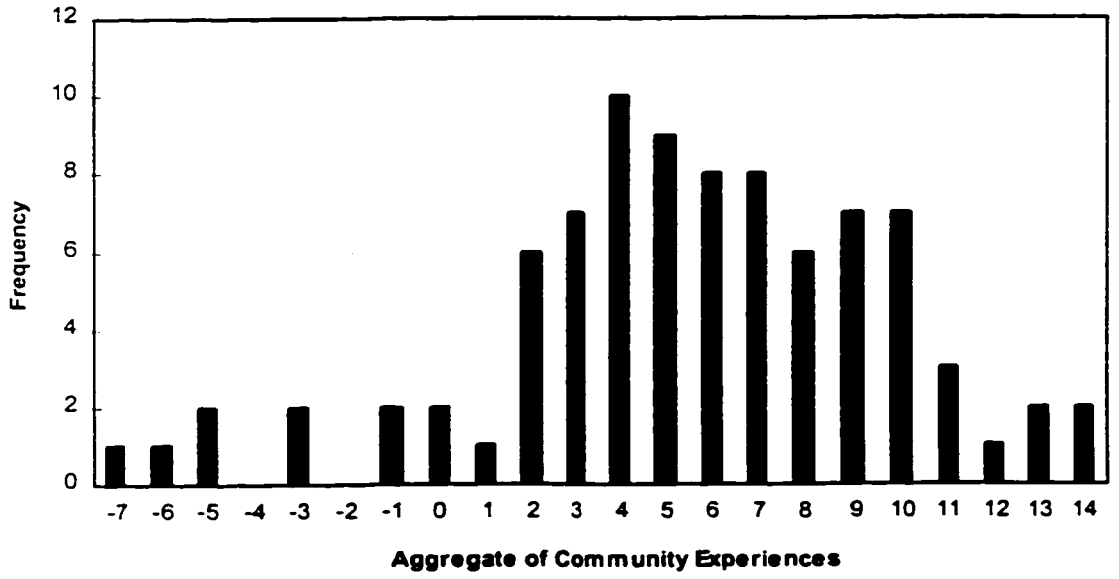
The hypothesis that perception of the community would impact upon treatment outcome was assessed with regression analyses. As in the case of the process evaluation, the pretest scores were entered first followed by the ten Moos subscales. Separate regressions were repeated for all outcome variables. Very few analyses yielded any interpretable significant results. Specifically, the block of the ten Moos subscales did not yield a significant beta for any of the 24 outcome variables. However, in a few instances, individual Moos subscales were predictive of some outcomes. For instance, lower perceived staff control was predictive

of less frequent and less severe PTSD symptoms at follow-up. Greater perceived support in the community was predictive of a decrease in somatic symptoms and less self destructive behaviour at posttest. However, given that the block of variables was not significant, it may not be appropriate to look at individual predictors (Cohen & Cohen, 1983; Pedhazur, 1982)

Interview data. Client's experiences in the community milieu were examined with a semi-structured interview. A total of 87 participants were interviewed. There was a considerable range in total scores, from -7 to +14. Negative score indicate predominantly negative experiences with the reverse being true for positive scores. The mean interview score was 5.4, indicating that overall experiences in the community were moderately positive. Figure 7 depicts the frequency of interview total scores for the 87 interviewees.

Figure 7.

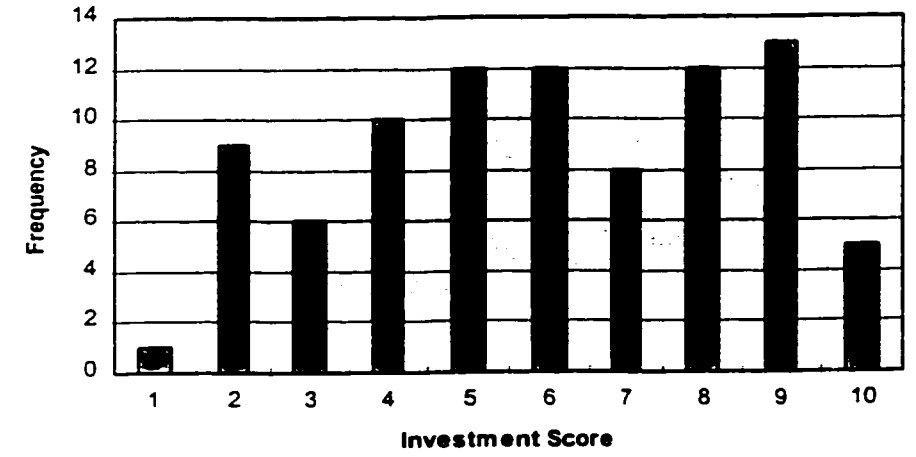
Frequency Distribution of Total Scores of the Community Experiences Interview



Investment. As would be expected there was considerable variation in client investment ratings, as reported by prime nurse therapists. Figure 8 depicts the frequency distribution in investment scores. The mean investment score was 6.0 (SD = 2.4), indicating that on average, clients were moderately invested in their program

Figure 8.

Frequency Distribution of Investment Scores



Because community experiences and investment both reflect the context in which the treatment occurred, these two scores were entered together in a second step in a series of regression analyses testing for significance of prediction of posttest scores, after the variance attributable to pretest scores was covaried out in the first block. The results of the 24 regression analyses indicated that interview scores significantly predicted only two of the outcomes. These were body shame ($p = .05$) and frequency of hyperarousal symptoms ($p = .027$). Eight outcomes were predicted by the investment measure with one overlapping with community experiences. Table 11 reports the standardized beta weights for the regression equations in which the effect of investment and/or interview scores were significant. The significance of these beta weights as well as the percent variance accounted for by each block is also reported.

Table 11

Significant Regression Analysis of Interview and Investment on Post-test Scores

Outcome Variable	Pre-test Scores[1]		Interview/Invest Block	Interview	Investment
	Beta	% variance	% variance	Beta	Beta
Body Shame	.44[d]	23.8[d]	12.6[b]	.21[a]	.22[a]
Safety - COPM	.23[a]	5.6[a]	18.7[c]	18	.34[b]
PTSD C: Frequency	.40[c]	13.9[c]	10.6[a]	.04	-.34[b]
PTSD C: Severity	.47[d]	5.9[c]	12.6[b]	-.02	-.35[b]
PTSD D: Frequency	.62[d]	34.1[d]	10.4[b]	-.22[a]	-.17
PTSD D: Severity	.71[d]	40.6[d]	11.5[c]	-.17	.,25[b]
Other Beliefs	.63[d]	38.6[d]	8.8[b]	.02	-.30[b]
Self Beliefs	.55[d]	32.7[d]	8.1[a]	.09	-.23[a]
Hope	.56[d]	32.4[d]	12.0[b]	-.14	.27[b]

Note: 1. Co-efficients are taken from the first step in the regression. Only outcomes with at least one significant predictor are presented (in addition to covariate). [a] $p<.05$, [b] $p<.01$, [c] $p<.001$. [d] $p<.0001$

As would be expected, pretest scores accounted for a significant proportion of the variance in posttest scores (~ 5 to 40% in the nine outcomes listed). After controlling for this variance, interview scores, and/or the investment measure accounted for another significant proportion of the variance (~ 8 to 18%). The beta weights are all in the expected directions. With respect to body shame the regression analysis revealed that clients who had more positive experiences in the community and were more invested in the community had better outcomes (as higher scores are more adaptive). Similarly, clients who were rated as more invested in the community also indicated greater ability to manage their personal safety as rated on the COPM. The negative beta weights on the frequency and severity of PTSD symptoms indicate that scores declined as investment increased. In the case of frequency of hyperarousal symptoms, better experiences in the community were related to a decrease in scores. As higher scores reflected more distorted beliefs on the *TSI Belief Scale and the Beck Hopelessness Scale*, the negative beta weights indicate that scores were most improved among those most invested.

In summary, investment scores significantly predicted eight outcomes, while experiences in the community predicted two outcomes. In only two cases (body shame and frequency of hyperarousal symptoms) were both variables significant predictors. The simple correlation of interview scores with investment was .34 ($\underline{p} = .004$) indicating that not all the variance accounted for by the investment/interview block is shared variance. However, it would seem that investment in the program is a better predictor of posttest scores than the impact of the community milieu.

Discussion

The purpose of this research was twofold. First, the microtheory of how a particular inpatient program for chronic PTSD functioned was examined with both a program *outcome* evaluation and a program *process* evaluation. Second, the macrotheory of what constitutes optimal treatment of PTSD was examined. Specifically, the treatment model employed in this work stipulated that some symptoms and problem behaviours (e.g., lack of responsiveness to pain, failures to maintain safety or engage in appropriate activities of daily living) are subordinate to others (e.g., disturbed relationships, hopelessness, loss of meaning). Thus, it was hypothesized that treatment should focus on issues of safety which addressed the more basic symptoms of PTSD. Furthermore, a major tenet of the treatment model is that PTSD is a "social wound" requiring "social healing". This contention was examined by investigating whether client perceptions of the therapeutic community mediated treatment gains.

This research adds to the body of literature on PTSD treatment outcome in that it was conducted on a sample which is more diverse than typically reported. Few reports on in-patient treatment deal with mixed gender samples, and frequently report exclusively on male Viet Nam combat veterans (Blake & Sonnenberg, 1998). Some authors argue that treatments should be trauma-specific, whereas this treatment model is based on the presumption that "trauma is trauma". Rather than restricting the sample to a single type of trauma experienced for example, combat or sexual assault, the participants in this study reported histories of multiple traumas including abuse during childhood or adulthood, serious accidents, criminal victimization, and work-related trauma. Ninety-six percent of the respondents in this study reported significant symptomatology in clusters B, C, and D, to qualify for a DSM-IV diagnosis of Post-traumatic Stress Disorder. The chronicity of difficulties also varied significantly, from one year to over five decades.

It is important to note, however, that no attempt was made to determine the veracity of clients' reports of trauma experienced or to determine whether the severity of the stressor would meet the threshold for Criterion A as stipulated by DSM-IV (American Psychological Association, 1997). This decision was made in deference to preferences of treating clinicians

who routinely avoid this type of questioning. It is felt that such inquiries are disrespectful and can re-traumatize survivors, particularly in cases where individuals were not believed as children when they reported the abuse they were suffering. Given that the presence or absence of Criterion A cannot be ascertained, it cannot be determined with absolute certainty what proportion of participants in this study would qualify for a DSM-IV diagnosis of PTSD. While not ideal from a research standpoint, this limitation reflects the reality of the treatment environment in which the study was carried out.

The sample in the present study is also quite large relative to many that are reported in the literature. With the exception of two inpatient studies which reported on 51 and 58 veterans respectively (Johnson et al., 1996; Silver et al., 1995), studies more commonly report on sample sizes of 10 to 30 participants, and several single-case designs have been reported (Blake & Sonnenberg, 1998). Furthermore, the participation and retention rates with the present sample were good. Eighty-three per cent of persons who attended the program completed at least one set of questionnaires. Twenty-eight percent of the data was lost between admission and discharge, largely due to premature discharges, while 52% of persons who completed post-treatment questionnaires also returned packages at four-month follow-up. The response rate for mailed questionnaires exceeds that typically reported.

This study makes use of a quasi-experimental design which is more powerful than the single group pretest, posttest design frequently utilized in this type of research. Waitlist data was also collected from approximately half of the participants while they awaited entry to the program. This data enabled stronger conclusions about the effect of treatment to be made. Furthermore, due to a continuous admission process, a series of cohorts were created. This allowed the use of a multi-cohort recurrent institutional cycle design (RICD) to test for the possible effects of history. In instances where random assignment is neither possible nor desirable, the RICD allows firmer conclusions to be drawn about a treatment's efficacy than single group pretest, posttest designs because the alternative explanations, i.e. to internal validity can be eliminated.

In the present case, some possible threats to internal validity were eliminated through a series of analyses. The lack of significant main effects for cohort or interaction of cohort and time on any of the 25 outcome variables supports the contention that the results could not be

accounted for by some historical factor other than participation in the program. It was also demonstrated that there was no impact of multiple responding (instrumentation) as participants who completed more questionnaires than others did not differ in their outcomes. Attrition analysis revealed that drop-outs differed from participants on only a few dimensions, and these were related to therapeutic readiness.

It is true that in this study no attempt was made to control the selection of clients entering the program. Clients did self-select because they come voluntarily to the program, often when it was most convenient for them. Some clients who were contacted did elect not to attend the program. It was not always possible to determine how these clients were functioning relative to those who did decide to attend. It could be argued that they were likely functioning better and therefore felt they did not need the program. Alternatively, it could be argued that at least some of these clients were functioning less well. Perhaps they could not maintain the sobriety or were too much in crisis to attend the program at the present time. In the present sample, anecdotal impression suggested that both scenarios occurred. However, because this information was not available on all non-attendees, it was not possible to examine selection effects. Any threat to internal validity of selection must be balanced with the external validity that this is the reality of a clinical sample. It is argued that external validity is a more important consideration in the present study. The sample of participants is representative of the sample of persons who attend such programs.

It must be acknowledged, however, that use of a quasi-experimental design imposes a limitation on the ability to make causal inferences. Thus, it cannot be said with absolute certainty that the program caused the outcomes. Finally, a further limitation of the study is that all of the data regarding treatment outcomes was collected by self-report from clients.

Treatment Effects

The hypotheses tested were as follows:

1. The program theory is correct as stated. Thus, relative to their status at admission, clients will report improvements at discharge with respect to the 13 objectives of the program. Sub-hypotheses 1a) through 1m) state that each of the 13 objectives of the program are met.

2. If all of the 13 objectives are not all met, it is hypothesized that objectives considered to reflect more basic needs (i.e., lower on the hierarchy) will be the ones that are met.

3. The program functions as articulated in that more substantial improvements are related to more time spent in objective-related activities.

4. Clients' perceptions of and experiences in the community milieu will have a significant impact upon the gains made in the program.

The results of the program outcome evaluation revealed that treatment was quite effective in meeting some objectives of the program and less effective with respect to other objectives. Specifically, it can be concluded that the objectives of increasing body awareness, increasing self-care, decreasing other trauma-related symptoms, increasing emotional expression, and improving self beliefs were all met. Furthermore, seven other objectives were partially met in that improvements were noted on some measures of the objective and not on others. For example, in the case of the all three PTSD clusters, frequency of symptoms decreased, but not severity. Furthermore, improvements were noted in two types of coping styles (emotion-focused and disengagement) but not in active coping. Only one of the safety measures (beliefs re self) showed significant treatment effects, and there was no treatment-related improvement in "other beliefs". Improvements were noted in self-rated relationships goals and spirituality/meaning goals were met in only a small subset of the sample who specifically articulated them. Last, treatment-related increases in hope were not maintained at follow-up.

There are a number of explanations that could account for these results. In some cases, it is likely that limitations of the measurement instruments account for failures to find treatment effects. Lack of statistical power was also an issue due to a smaller sample size with some of the self-generated goals. In other instances, it is more likely that the program does not include enough activities that adequately address the objective area in order to make a sufficient impact. What follows is a objective by objective analysis of the treatment effects and reasons for failure to confirm some of the hypotheses.

Objective 1: Body awareness and esteem. Treatment effects were noted for both the measures derived from the *Body Awareness Questionnaire (BAQ)*, but not the somatization scale from the *Personality Assessment Inventory (PAI)*. The reason for this is likely in the nature of the measures. The *BAQ* was created specifically to assess changes in body

awareness and esteem that were targeted in the program. Item content was derived from themes addressed in the body esteem education groups. The measure focused on attitudinal change. In contrast, somatization items are worded like a symptom check list (e.g., headaches, gastrointestinal problems). In this regard, it could be concluded that somatic symptoms have not decreased with treatment. To the extent that this is a objective of treatment for PTSD, there are limits in the body awareness that was achieved. Overall, the hypothesis relating to this objective was partially supported.

Objective 2: Coping strategies. The authors of the instruments used (Carver & Schiere, 1994) have discussed whether the *COPE* can be used as a trait measure or with situationally-worded instructions. In the present research, the decision was made to use a trait-worded version of "coping with stress" because it was felt that it would be difficult to have respondents conjure up a particular incident that would be reflective of the diverse phenomenology of PTSD. This decision may have particular implications for the results obtained. Specifically, it was demonstrated that for all three empirically derived factors (active coping, emotion-focused coping, and disengagement coping), scores remained stable across the waitlist period. This would suggest that it is reasonable to consider these behavioural tendencies as relatively stable coping styles. Changing such styles in a six-week program is quite a challenge, however, some change occurred. Immediately following treatment, improvements were noted in the two coping styles considered to be adaptive, active coping and emotion-focused coping, and there was also a significant reduction in the maladaptive style of disengagement. Unfortunately, the gains in active coping were not maintained at follow-up. In fact, mean frequency scores returned to pre-treatment levels. It seems that clients had difficulty continuing to use these new-found skills once they returned to their daily lives. It has been reported that many clients find the lack of structure after discharge difficult to manage (Wright et al., 1996). After the initial outcome evaluation was completed in 1995, the program was modified to include groups which address "Life Outside Homewood" and planning for discharge. It would seem that this modification had the desired effect because clients in the present outcome study maintained many of their gains. It is promising that clients were able to maintain gains in two of the three coping skills domains. Furthermore, given that the avoidance/numbing symptoms have been described as

particularly difficult to ameliorate (Rogers, 1998), it is impressive that clients report tending more to seeking social support and using less avoidant coping. To a large extent, the hypothesis relating to this objective has been confirmed.

Objective 3: Self-care. The single measure of this objective was client ratings made on the self-care goals generated with the *COPM*. This is slightly problematic because only 71 clients articulated goals related to self-care and hence this objective could not be assessed for the entire sample. However, it could also be argued that many clients did not generate self-care goals because they were not experiencing any difficulties in this domain and were currently working on objectives higher in the treatment hierarchy. Post hoc examination of the *COPM* data indicated this to be the case for the majority of respondents. Results of the repeated measures MANOVAs demonstrated highly significant treatment effects for self-care goals. This pattern of results was obtained for both performance and satisfaction scores. The authors of the *COPM* have indicated that increases of 2.0 or more in client ratings indicates "clinically significant improvement". Such improvement was noted between admission and discharge, but the gain missed the mark at follow-up (mean difference in scores pre-treatment to follow-up is 1.6). It is concluded that this objective has been met in a sizable portion (72%) of the participants. Finally, it is important to note the diversity of improvements that are encompassed in the category of self-care goals. Examples of goals included in this category are managing nightmares and flashbacks, sleep hygiene, budgeting, and maintaining an adequate diet. Thus, although this is a single, relatively simple measure, it represents a host of positive changes being made. Furthermore, these are changes that the clients themselves have identified as one of the five most important areas for personal change.

Objective 4: Safety. As discussed previously, safety is considered the cornerstone of PTSD treatment by experts in dealing with traumatized individuals (e.g., Bloom, 1994, 1997; Herman, 1993; van der Kolk, 1996a). Certainly it is the foundation of the treatment model under investigation. Improvements were noted on both measures of this objective, confirming hypothesis 1d.

It has been widely reported that trauma survivors (particularly those who were victims of prolonged or repeated trauma) often have difficulty appraising the danger in situations. Thus,

they tend to put themselves in dangerous situations where they are repeatedly victimized. At times the victimization is subtle and they do not even appreciate that they are compromising emotional or physical safety. One of the treatment approaches utilized in the *PTSR* centers on efforts to heighten awareness in order to prevent re-victimization. In the experience of the clinicians at Homewood, ratings of ability to maintain safety (as rated on the *COPM*) occasionally go down between admission and discharge. It is felt that this is a reflection of increased awareness of the breadth of areas in which safety should be a concern. This includes an appreciation of emotional and relational safety in addition to physical safety. Anecdotally, clients have reported that they came into the program believing that they were managing their safety concerns, but learned that this was not the case. The pattern of results obtained for the *TSI Belief Scale* safety-self subscale supports these clinical observations. Improvements are not noted between admission and discharge, but a "sleeper effect" occured such that clients reported improvements at follow-up. It would seem that after clients begin to be made aware of the issue of safety in their lives, they are better able to maintain it. Overall, the hypothesis relating to the objective of maintaining personal safety was supported.

Objective 5: PTSD B (intrusive symptoms). Objective 6: PTSD C (avoidant symptoms), Objective 7: PTSD D (hyperarousal symptoms). The hypotheses (1e through 1g) relating to these objectives were only partially supported. Clients reported that the frequency of their PTSD symptoms decreased with treatment, whereas severity scores did not. An awareness argument could also account for this pattern of results. It has been noted that often clients arrive at the *PTSR* unaware that the myriad of symptoms they are experiencing actually has a name. For example, they are unaware that their anger/irritability and exaggerated startle response are part of a recognizable syndrome. Through psycho-education they come to learn that these symptoms are the residuals of once adaptive responses to the trauma that are now maladaptive. Thus, it may be that increased understanding and awareness has heightened the salience of these symptoms, thereby increasing the reporting of them.

An alternative explanation for these "treatment failures" is offered by Rogers (1998). She concludes that a thorough examination of the treatment outcome literature reveals that the so-called "second generation" treatment programs are ineffective relative to the "first

generation" programs precisely because they fail to address core symptoms with exposure therapy. She is critical of approaches that concentrate on skills acquisition in the present, arguing that at times, this inhibits the processing of traumatic memories which amounts to aborted exposure therapy. Even in instances wherein flooding or systematic desensitization therapy is conducted, Rogers argues that it is often done inconsistently or incompletely. For example, survivors are not encouraged to select specific stressors to work on or the exposure is delivered in group format which cannot be tailored to the individual. Consequently, some veterans actually show an increase in their distress following inpatient stays. Rogers cites the studies by Johnson et al. (1996) and Solomon et al. (1992) as examples of this disturbing trend.

However, it is important to note that Rogers is discussing treatment failures in in-patient programs for combat-related PTSD. The program that is the focus of the present research is a "second generation program" but not one that caters particularly to the veteran population. Rather, the vast majority of participants are survivors of childhood trauma. To date, very few studies have examined exposure therapies in the treatment of PTSD subsequent to a history of child abuse. Indeed, clinical lore holds that such an endeavour is not likely to be therapeutic given the lack of a focal stressor upon which to concentrate. However, Shapiro (1989) reports on a mixed sample of combat, sexual assault, and incest survivors. Following EMDR, all participants demonstrated significant gains in presenting problems, and reported less subjective distress. These gains were maintained at 3-month follow-up. Thus, there is some preliminary data that EMDR may be efficacious in reducing the sequelea of child abuse. While Brom et al. (1989) investigated the incremental gains of adding EMDR to the inpatient milieu for combat survivors, this has not been done with other types of trauma survivors. This could certainly be investigated more thoroughly in future research.

Objective 8: Other symptoms. Among trauma survivors, psychiatric co-morbidity is common (Davidson et al., 1991; Keane & Wolfe, 1990; Zlotnick et al., 1999). In the present sample, depression, anxiety, and dissociation were the most common difficulties with self-reported rates of 89%, 77%, and 73%, respectively. These rates are higher than reported in community samples, but similar to those reported in clinical samples (Meichenbaum, 1994). The presence of depression and substance abuse have been associated with a

prolonged course of PTSD, often necessitating more intensive treatment (Bremner et al., 1988).

Two factors derived from Briere's *Trauma Symptom Inventory* were used to assess changes in associated features of traumatization. It was demonstrated that following stable baselines, both generalized distress and self-regulation improved with treatment and remained improved at follow-up. With the information obtained, it can be concluded that the hypothesis relating to this objective has been supported. However, it should be noted that the *TSI* assesses these symptoms in terms of frequency, so nothing is known about the perceived severity of these symptoms. The decision to use the TSI as an instrument rather than specific measures of severity of depression or anxiety (e.g., Beck) was made in the interest of brevity and convenience. The *TSI* was currently being used to gain information during assessment week, making it a pragmatic choice as an outcome measure. Given the lack of efficacy demonstrated with respect to severity of PTSD symptoms, in retrospect it may have been prudent to include severity measures for the "other symptoms" for comparison purposes.

Objective 9: Emotional expression. Restricted range of affect has been described as a cardinal feature of PTSD (van der Kolk, 1996a) and other psychiatric disorders (Taylor, Bagby, & Parker, 1997). Both measures, the *TAS-20* and client-generated feelings goals, demonstrated that treatment was efficacious, supporting hypothesis 1i. This is significant because alexithymia has been conceptualized as quite a stable trait, with consistency comparable to personality traits (Bagby et al., 1994). Given that the program was only six weeks long, such improvements are indeed remarkable.

Although placed well along the hierarchy in the treatment model proposed, Taylor would likely argue that achievement of this objective is a prerequisite to decreasing somatic symptoms. Somatic symptoms had been conceptualized as an aspect of body awareness, and placed much lower on the hierarchy in the proposed scheme. Given that the objective of increased emotional expression was met, whereas decreases in somatisation were not noted, it may well be that this aspect of the treatment model is incorrect, and somatization belongs higher on the hierarchy.

McFarlane and van der Kolk (1996) state that "the degree to which trauma is expressed in psychosomatic problems has long been recognized, but little has been done to clarify the

nature and treatment of this vexing problem" (p. 570). New data are just now beginning to emerge on the effects of trauma on the immune system, and these may help provide new directions to understanding and treating somatization. For example, a recent study found significant immunological abnormalities in women with histories of chronic sexual abuse (van der Kolk, Wilson, Burbridge, & Kradin, 1996), while earlier studies demonstrated that being able to express one's distress verbally can have a significant positive effect on immune functioning (Pennebaker & Susman, 1988; Speigel, 1993). These findings reflect the complex interrelationship between mind and body, a relationship that is often severely dysregulated in PTSD (van der Kolk, 1996b). At this time, it is difficult to formulate how these findings will be translated into more effective treatments for traumatized patients with somatizing disorders. However, the results of the present study clearly suggest that decreases in somatic complaints require more than increased body awareness and improved body esteem and even an improved ability to express emotion.

Objective 10: Relationships. As outlined in the literature review, not all traumatized individuals suffer disruptions in their relationships with others. Such difficulties are more common among victims of prolonged "Type II" traumas (Terr, 1991), and have come to be considered part of the symptom picture known as "complex PTSD" or DESNOS (Herman, 1993; van der Kolk et al., 1994). The *TSI Belief Scale* was normed on a clinical sample of trauma survivors and hence is quite representative of the core domains of distorted beliefs (trust, esteem, control, intimacy). Baseline scores did reveal significant difficulties with respect to views about others. Unexpectedly, there was a significant improvement in these distorted beliefs during the waitlist period. It is unlikely that this is an anomaly. It is argued that this represents attempts on the part of potential community members to prepare themselves for their upcoming admission. In keeping with cognitive dissonance theory, it is unlikely that an attendee would be able to manage their conflicted feelings about attending a community-oriented treatment program in the face of continued negative views of others. After admission, views about others remained virtually unchanged. At discharge, beliefs remained comparable to the means of the clinical normative sample (Perlman, et al., 1992).

Approximately two-thirds of participants articulated specific goals about improving the quality of their interpersonal relationships. In contrast to the results of the *TSI Belief scale*,

on the *COPM* participants reported significant improvements in "relationships" as a result of treatment. This leaves open the question of how relationships could improve in the face of strongly-voiced negative beliefs about others. One hypothesis could be that in rating their relationship goals, clients were rating a specific relationship whereas in completing the TSI Belief scale, clients were revealing their general views of the world. Thus, it may be that despite treatment in a therapeutic community, clients retain their distrust and apprehension of the world. On a positive note, perhaps they are better able to find solace in at least one significant other.

Objective 11: Self beliefs. Associated features of a traumatic history and subsequent chronic PTSD are feelings of helplessness, guilt, and shame (Briere, 1992; Terr, 1991). The reversal of these negative self beliefs has long been a focus of survivor therapy (Briere, 1992). Although many authors call for the direct confrontation of the traumatic experiences, the treatment program under review attempts to provide a supportive environment in which to address traumatic experiences. According to participants' reports, self beliefs were stable (and quite negative) prior to entering the program. Following treatment, clients indicated improved self worth and maintained these gains at follow-up. Anecdotally, many respondents reported that it was the experience of knowing and living with other trauma survivors (often for the first time in their lives) which had a dramatic and positive effect. It is theorized that improved self worth will increase the likelihood that clients will continue to recover from their traumatic experiences.

With respect to its position in the treatment hierarchy, this objective was placed after the "relationship goals" to reflect Maslow' s original conceptualization. In his theory, love and belongingness needs are to be met prior to (self) esteem needs. However, there is a body of literature which disputes this ordering of needs, (Brown, 1992; Davis-Sharts, 1987; Heylington, 1992; Hagerty, 1999; Manior, 1998; Pettijohn, 1996) with some authors arguing that one must first gain self esteem before he/she can have esteem for another . In the present study, the evidence suggests that self esteem improved in the absence of improved regard for others. Thus, a modified Maslovian hierarchy more accurately reflects the underlying process.

Objective 12: Hope. Although hope increased between admission and discharge, these gains were not maintained at follow-up. Hence, this objective holds the distinction of being the only objective that was not met (at least to some extent). Given that the maximum score is 20, scores in the range obtained (9.0 or greater) are considered to be in the moderate range in terms of severity (Beck & Steer, 1988). Furthermore, Beck, Steer, Kovacs and Garrison (1985) have reported that *BHS* scores of 9 or more were predictive of eventual suicide in depressed suicide ideators followed for 5 to 10 years after hospital discharge. This objective has not been met and gives some concern in terms of meeting the ultimate objective which is to create the desire to continue healing.

Certainly the conclusion that this hypothesis was not supported could be seen as a measurement issue, that is, there is only one measure of it, whereas most of the other objectives had two or three measures. However, it must also be noted that this objective is quite high along the hierarchy, and as such might not be expected to be met in such a chronic clinical population. There were multiple indicators of the chronicity of the difficulties being experienced. For instance, the majority of clients had previous psychiatric admissions and multiple co-morbid psychiatric diagnoses. Clients also reported that they had been dealing with the aftermath of their traumatic experiences for an average of over 14 years. Furthermore, respondents were asked to rate their ability to "live a normal life" on a scale from 0 to 100, with 100 representing the pole of lack of normalcy. The mean rating was 77.8 , indicating their belief that their lives were quite hopelessly altered by their experiences. Given this level of chronicity, it is not entirely surprising that hopelessness remains an issue with this population.

Objective 13: Spirituality/Meaning. This objective represents the upper end of the treatment hierarchy and has been described as a powerful motivational force in recovery from trauma (Tedeschi & Calhoun, 1996). This objective was not adequately addressed in the program outcome evaluation for two reasons. The major reason was the fact that the *Post-Trauma Growth Inventory* was not administered as a pre-post treatment measure. This decision was made in the interest of shortening the questionnaire package given to respondents. The instructions asked respondents to rate the positive changes made "since" attending the PTSR. The obtained data is difficult to interpret because this measure has not

been normed on a clinical sample nor with persons who have experienced a traumatic event that would meet the severity of stressor Criterion A for DSM-IV. At best, it can be concluded that participants' gain is consistent with growth achieved as a result of completing the *PTSR*.

The second reason that this objective was difficult to assess was that such a small subset of clients (n = 27) articulated spirituality goals. (However, those who did reported significant advances toward meeting these goals.) The low endorsement of these objectives could be used as evidence that indeed such objectives are appropriately placed a the upper end of the treatment hierarchy.

Summary. With respect to the first hypothesis, it is concluded that five of the sub-hypotheses were supported, seven were partially supported and one was not supported. Specifically, support was obtained for sub-hypotheses 1c, 1d, 1h, 1i, and 1k, which correspond to the objectives of enhancing self care, increasing safety, decreasing trauma-related symptoms, increasing emotional expression, and improving beliefs regarding the self, respectively. Partial support was obtained for sub-hypotheses 1a, 1b, 1e, 1f, 1g, 1j, and 1m, which correspond to the objectives of enhancing body awareness, improving coping, decreasing PTSD symptomatology, improving beliefs regarding others, and gaining a sense of spirituality/meaning in life, respectively. The hypothesis related to the objective of enhancing hope (1-l) was not supported. Thus, not all of the objectives were met, and objectives lowest on the treatment hierarchy were not met whereas many of the objectives higher in the hierarchy were met. Given this pattern or results, it is necessary to conclude that hypothesis 2 was not supported.

Magnitude of Treatment Effects

In addition to determining whether treatment effects were statistically significant, this program evaluation also examined the magnitude of these effects. Cohen (1965) has suggested that effect sizes be classified as small, medium, and large in the following manner. Ratios of .3 to .49 are considered "small", .50 to.79 are "medium", while ratios .8 and above have been labeled "large". Although somewhat arbitrary, this classification system is widely regarded as the standard in psychological research (Pedhazur, 1982) and thus these

classifications will be used to evaluate the treatment effects in the present study. There are a number of effects which would fall into each category. Outcomes which are deemed relatively small are the improvements in body awareness and body shame, safety beliefs and ratings of ability to maintain safety. Moderate treatment effects were obtained for the coping variables, the frequency of all three clusters of PTSD symptomatology, the two symptom profiles of the *Trauma Symptom Inventory* and self beliefs. Largest effect sizes were noted for self care goals, alexithymia, feelings goals, relationship goals, as well as spirituality goals. It is interesting that with the exception of self care goals, the objectives that demonstrated the largest gains were those near the top of the hierarchy. In summary, there were 17 outcomes for which mean scores were significantly improved (statistically) at four-month follow-up. Of these effects, 4 could be considered small, 8 moderate and 5 large, using Cohen's categorization scheme. The fact that so many effects were moderate to large indicates that this program is quite effective.

Clinical Significance

The treatment effects were also examined with respect to their "clinical significance" (Jacobson et al., 1999). Clinical significance was operationalized in three different ways, depending on the measure and the norms available. As noted above, clinical and non-clinical norms were not available for all outcomes and this limited the assessments of clinical significance that could be calculated. Thirteen assessments of clinical significance were made and it was determined that the proportion of clients who were significantly improved ranged from 2% to 90%.

The Process Evaluation

Detailed activity logs were collected from 119 participants, from which a subsample of 77 persons who had contributed three or more logs was used. Participants who returned logs did not differ from those who did not on any of the outcomes variables or with respect to their investment in the program. Reliability checks revealed that clients were generally quite accurate in their reporting of their attendance. There was no evidence that clients attempted to make themselves look good by reporting that they attended sessions which they did not.

Rather, clients tended to under-report their attendance, a tendency which was likely related to simple forgetting. The activity logs were a simple and reliable method of recording time spent in program activities.

The results of the regression analyses failed to support the program theory as specified. Greater time in particular program activities was not associated with improved outcomes on the objectives hypothesized to be linked to these activities. It is apparent that the program is effective, but not for the reasons specified in the program logic model. Given that most objectives had multiple activities associated with them, it is likely that the program model is over-specified, that is, there are too many linkages hypothesized. Yet, the results of the regression analyses do not clearly indicate which activities could be redundant.

The basic premise of the program is that healing occurs through interaction with other trauma survivors. This premise is supported in that improvements were most reliably associated with group activities, particularly process-oriented activities. It is an intentional feature of the program that it is delivered in groups. Individual interventions are kept to a minimum and only offered as consultations where necessary (e.g., to doctors, dieticians, addiction specialists). It is true that each client has a prime nurse therapist who acts as a case manager. At times the individual contact becomes lengthy and results in something akin to individual therapy. There is considerable variation in reports of time spent with prime nurses, an occurrence which often leads to resentment among members of the community. Some members feel that others are getting something that they are not and that lack of individual therapy hindered the gains they made in the program. However, as indicated by the regression analyses, increased time spent in individual interventions is not associated with greater treatment gains. Thus, the perception that increased time being seen individually is beneficial is not borne out by the data. In summary, strong support was not provided for the third hypothesis tested.

The Effect of Program Climate and Context

General Comments. The climate of the program was assessed in two ways. Participants responded to the Moos *Community Oriented Programs Environment Scale* and to open-ended questions about their experiences living in the community milieu. The responses provided on

each of these two measures indicated that, on average, clients viewed the community positively and tended to have positive experiences. There were no significant differences in climate across the various cohorts as examined with comparisons of group means. There was considerable variation in perceptions and experiences between individuals and it was hypothesized that this variation would be related to differential outcomes. More specifically, it was hypothesized that persons with more positive experiences would have more positive outcomes than those with less positive experiences. The regression analyses failed to support this hypothesis. However, the *COPES* did allow the demonstration of a lack of difference in perceptions across cohorts. It may be the case that the failure to find support for the hypothesis is the result of limitations in the instruments used.

COPES. Although the Moos *COPES* is widely used, there is evidence to suggest that its conceptual basis is weak. For instance, Schwartz (1982) failed in his attempts to replicate the factor structure proposed by Moos (1974). Kohn, Jeger and Koretzky (1979) presented data which suggest that Moos's middle dimension (personal development) does not hold up empirically. These authors favor a two factor solution that is similar to Moos's first and third factors. In the present sample, factor analysis yielded a somewhat interpretable result but not the underlying structure proposed by either Moos (1974), Kohn et al. (1979) or Schwartz (1982). The reliability of the factors did not offer a significant advantage over the individual subscales. Taken together, it is suggested that this measure does not adequately capture the previously proposed dimensions. Birch, Dunstan, and Warren (1999) conclude that these are the difficulties inherent in measuring intangible concepts like democratisation, reality confrontation, permissiveness, and communalism. They conclude that these themes are ideological concepts which cannot easily be measured as psychological events, serving instead only a useful descriptors of the philosophy underlying therapeutic milieus. This researcher disagrees with their contention that the concepts underlying the therapeutic milieu cannot be measured, although it is likely that the Moos *Community Oriented Programs Environment Scale* is not the best instrument for the job. Modifications such as that proposed by Kohn et al. hold more promise and could be used in future research.

Other authors have argued that it is not the perceptions of the community per se that are associated with differential outcomes but discrepancies in perception between community

members and staff. For instance, Friedman et al. (1986) reported that differences in client and staff perception of autonomy and staff control significantly predicted treatment outcome in a therapeutic community for substance abuse. The greater the discrepancy between client and staff, the less successful was the treatment outcome. One possible interpretation of this finding might be that in instances where clients are poorly motivated and more resistant to treatment, the clients will not only tend to have poorer treatment outcomes, but will also perceive the program more negatively and thus will tend to disagree more with the staff's perceptions of the program. This hypothesis is negated by the fact that there were no significant correlations of investment with any of the Moos subscales. While it is true that clients vary in investment, and this is related to outcomes, investment per se does not account for differences in perception.

Segal, Everett-Dille, and Moyles (1979) examined the conditions contributing to agreement or disagreement in perception between residents and staff in a sheltered-care facility. Areas examined included resident satisfaction and the extent to which a family-like atmosphere was obtained at the facility. Residents' *COPES* assessments were found to be superior predictors of their post-discharge social integration. Thus it would seem that examining perceptual congruence could be an interesting evaluation strategy. This was clearly not the focus of the present research, but could be incorporated in future research.

The Community Experiences Interview. A great deal of interesting qualitative data was obtained with the *Community Experiences Interview*. As expected, a number of distressing events were described as were many positive and ultimately therapeutic encounters. The coding scheme used involved aggregating these experiences to arrive at a score reflecting the overall valence of their experiences in the community. As noted above, this overall score did not predict outcome. What was salient to this researcher during the interviews was the degree of variation in the individual responses to events in the community. In some instances, what would appear objectively to be a relatively minor negative event had a profound negative impact on the participant, preventing him/her from making good use of the rest of their stay. These clients presented as bitter and dejected, very much blaming the community for their perceived lack of progress. In other instances, clients were able to reinterpret objectively very negative events, ultimately turning the experience into a

therapeutic encounter for themselves. These observations highlight the importance of appraisal of the event. It stands to reason that if interpretation of the original traumatic experience can have a significant impact on future adjustment (Davidson & Smith, 1990; Green et al., 1985), then appraisal of current events in the milieu may also have an impact on treatment outcome. Unfortunately the questions posed did not allow a detailed examination of the appraisal processes at work. In retrospect, it would seem that it is not the presence or absence of negative or positive experiences in the community that is related to outcome, but rather how they are interpreted. Thus, a more sophisticated study of the impact of experiences in the community would specifically examine such appraisal processes. Future research should examine qualitative as well as quantitative data.

Investment ratings. The most consistent predictor of treatment outcome from among the contextual variables was the degree of "investment" the clients demonstrated in the program as rated by prime nurse therapists at the time of discharge. Post-analysis discussions with these raters reveals that a number of dimensions were considered, when making these ratings. Attendance at program activities was considered but what appeared to be most salient was the degree to which the client had engaged in the community. An engaged client was seen as someone who made attempts to interact with community members outside of the treatment groups, and perhaps took on some volunteer responsibilities in the community. These "engaged" clients were not necessarily the most gregarious or outgoing, but those who demonstrated some attempts to form relationships with others. Thus, clients who made the greatest gains were those who were observed to be attempting to use the therapeutic milieu. This provides some, albeit weak support for the notion that social wounds do require social healing.

Conclusions and Directions for Future Research

What this research has demonstrated is that the *Program for Traumatic Stress Recovery*, is a program that works. What we do not know is why it works. Rather than being able to demonstrate that particular activities are related to particular program outcomes, the current results suggest that the program acts as a sort of gestalt. It is much like the black box analogy. Clients leaving the program are better in a number of respects, but we are no closer

to knowing why. Yet, this program outcome evaluation has provided the first convincing evidence that clients can improve in second generation treatment programs. That is, symptom reduction can be obtained and maintained without the use of trauma-focused exposure therapies. Whether clients would experience even greater improvements had exposure therapies been included is an open question at this point. Future research should address whether a combination of cognitive-behavioural and process-oriented therapies is optimum in treating the complexity of PTSD.

Originally it was hoped to examine the contention that "trauma is trauma" that is, that treatment gains would be made independent of type of trauma experienced. However, due to the fact that over 95% of the sample reported experiencing abuse as a child as one of their traumatic experiences, it was not possible to make between-groups comparisons. Other researchers (e.g., Foa, Johnson) limit their samples to a particular type of trauma experienced and tailor their treatment protocols accordingly. Future research could use more heterogenous samples in order to determine whether such tailoring is actually required. The anecdotal reports of the persons in this study would seem to indicate that it was a therapeutic experience to discover that persons with diverse experiences had similar reactions to their trauma. In the absence of data, the decision regarding the optimal degree of homogeneity in treatment samples remains philosophical rather than empirical.

In conclusion, this study makes a number of important contributions to the literature on PTSD treatment outcome. First, it has been demonstrated that significant gains in PTSD symptomatology can be made by dealing with the "traumatic re-enactments" in the present. A focus on physical, emotional and relational safety, delivered in a therapeutic milieu, yields changes that are maintained four-months post-discharge. Furthermore, clients who engage more fully in the community demonstrate more significant gains, suggesting that social wounds are indeed ameliorated through social healing.

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Appendix A

Program Activity Descriptions

	Mandatory Attendance	Length of Session	Freq. of Sessions	Group Size	# Therapists	Discipline of Therapist
1. Body Esteem/Awareness						
Body Esteem Education	Yes	1 hour	1/week	25	1	recreation, DMT
Experiential Body Esteem	No	1 hour	1/week	varies	1	DMT
Getting Centered	No	30 minutes	4/week	varies	1	various
2. Didactic & Skill Building						
Coping with Feelings	Yes	90 minutes	1/week	25	1	psychology
Discharge Planning	Yes	90 minutes	4 total	3-6	1	psychiatry, social work
Education Groups	Yes	1 hour	1/week	25	1	various
Family Dynamics	Yes	1 hour	1/week	25	1	social work
Life Outside Homewood	Yes	1 hour	1/week	25	1	social work
Skills Groups	Yes	1 hour	1/week	25	1	various
Themes & Speical Topics	Yes	1 hour	1/week	25	1-3	various
Weekend Planning/Review	Yes	1 hour	2/week	8-10	1	various
3. Process- Oriented Groups						
Expressions	Yes	1 hour	1/week	25	1	various
Loss Group	No	1 hour	4 total	8-10	2	nursing, chaplain
Process Group	Yes	90 minutes	5/week	8-10	2	various

Sexuality & Intimacy	No	1 hour	1/week	varies	1	OT
4. Community Building						
Community Meeting	Yes	30 minutes	3/week	25	all staff	various
Community Party	No	2 hours	1/week	varies	0	n/a
Community Walk	Yes	30 minutes	2/week	25	2	OT, recreation
5. Expressive Arts Therapies						
Art Therapy	No	2 hours	4 total	6-8	2	art therapy, varies
Dance Movement Therapy	No	1 hour	1/week	varies	1	DMT
Finding Your Emot'l Voice	No	30 minutes	4/week	6-10	1	varies
6. Leisure						
Craft Zone	No	2 hours	2/week	varies	0	volunteers
Horticultural therapy	No	90 minutes	1/week	8	1	horticulture therapist
Leisure Connection	No	1 hour	4 total	4-6	1	recreation therapist
Play Shop	No	1 hour	1/week	varies	1	recreation therapist
7. Spirituality						
Exploring Spirituality	No	1 hour	2/week	varies	1	chaplain
Mind/Body Spirit	No	1 hour	1/week	6-10	2	DMT. chaplain

What follows is a description of each of the activities offered in the Program for Traumatic Stress Recovery.

CORE ACTIVITIES

1. Body Esteem/Awareness

Body Esteem Education

This is a mandatory didactic group which addresses issues related to body shame and guilt. It is run once per week by either a recreation therapist or a dance movement therapist. Clients are educated about the psycho-biology of traumatic experience and provided with information to dispel common myths about body reactions during trauma. For example sexual abuse survivors are taught that it is normal to have felt aroused during their experiences. Other topics include "Lookism", "Posture", and "The Five Senses".

Experiential Body Esteem

Clients are guided through various experiences designed to improve body esteem. This group is optional and offered once per week, usually by the dance movement therapist.

Getting Centered

This is an optional group which clients can attend immediately after process group each day (either this or Finding Your Emotional Voice - see below). Getting Centered involves a guided body scan to help clients become more aware of their physical reactions to feelings and issues and to re-orient themselves after the intense work of process group.

2. Didactic and Skill Building

Coping with Feelings

This is a mandatory attendance group offered once per week. It is a psychoeducational group which covers anger management, assertiveness training, as well as anxiety management. It is complementary with the skills groups.

Discharge Planning

This is a group that is offered in small groups (i.e., the group of people that are to be discharged in the next week). This replaces the regular process group for the last 4 days. The focus is on helping the clients to generalize the skills and positive experiences they had had in the program to their outside lives in order to be better able to maintain gains made. Clients are required to review their goals and make additional action steps to be carried out post-discharge. Where appropriate, social workers are involved to help clients procure adequate housing or deal with financial issues that would impinge on a clients ability to practice self-care. Practical issues such as explaining their hospitalization to others are dealt with as well as affective issues such as fears they may have about returning to the community.

Education Groups

This series of 6 sessions are mandatory and are run once per week in a continuing series. The topics include the study of the diagnostic issues in PTSD, common and personal patterns of victimization, the concept of the victim triangle, the impact of trauma on the body and the psyche, and the trauma bond.. They are primarily information giving in order to support the concepts that are referred to in other therapeutic groups.

Family Dynamics

This is also a series of 6 continuing sessions which are mandatory to attend. The purpose is to educate clients about the impact of trauma on families and systems as well as the common transactional patterns that occur in most families. The focus is on identifying dysfunctional patterns in order to assist clients in changing these pattterns. Often films and TV series are used to illustrate a concept and stimulate discussion on such topics as communication patterns, co-dependency, family roles, and trans-generational shame and guilt..

Life Outside Homewood

This group is mandatory for all participants and is run in a large group format, once a week, throughout the length of the program. Clients are required to contnue with refining their goal setting and appreciate the links between what they do in the programm and what occurs in their outside lives. It is didactic in the it educates clients about the

importance of therapuetic and social supports and addresses practical issues such as dealing with empoyers and disabililty issues.

Skills Groups

These are also mandatory groups run once per week. The topics include crisis management, coping with flashbacks, building a social support network, and training in a variety of grounding techniques. Clients complete a number of "homework" exercises in that they are required to keep logs of the various attempts that they made at using the skills taught.

Themes and Special Topics

This is a large group, informal meeting which the therapists use to address issues that may be occuring in the community. For example, the staff may re-present on the victim triangle if they view a lot of clients to be struggling with this concept. In other instances, they have taught about the power of scapegoating if they see it occuring. All members are expected to attend but the meeting time can be cancelled if their is nothing pertinent to discuss.

Weekend Planning/Review

This is a mandatory group that also occurs once weekly. Participants are grouped according to which process group they attend. Clients are required to review their treatment goals and generate ideas of how they will work on these over the weekend and post-discharge. Upon return on Sunday evening, clients must meet together in their small process-groups to discuss their success/failure over the weekend.

3. Process-Oriented Groups

Expressions

This is a mandatory group that is run each Friday afternoon, just prior to weekend discharge. Clients are expected to use this time to make expressions of how their week was or make statments to the community. For instance, departing community members often use this time to say some goddbyes to the community, while new members might share how they have experienced their early days in the the milieu.

Loss Group

This is a referral group that runs for four sessions. Typically the group is kept to eight to ten members. The focus is on the examining the losses that have occured as a result of the trauma. For instance clients might identify things such as loss of income or physical health. For other clients, the losses are more intangible such as the loss of childhood innocence, the loss of their virginity. The group works together to identify the feelings associated with the losses and attempt to come to terms with them in some way. During the last group, a closure ritual of their own creation is usually performed in an attempt to bring some closure to these issues.

Process Group

This is viewed as the cornerstone of the program. Clients attend process group every day of the week for the entire length of their stay. The group size is kept to 8 to 10 member necessitating that 3 different process groups are run at all times. The group membership is continually changing as clients are admitted and discharged each week (but once assigned to a process group, the client remains in the same group except in very unusual circumstances). The groups are co-led by two therapists.

The focus of the group is on client's "proceesing" their various feelings and attitudes as related to the traumatic experiences. Clients bring their issues to the group and discuss them. This could include the telling of the story of the traumatic experience or more present-day issues such as conflicts that may be occurring in the community. Clients are encouraged by the therapists to examine how their reactions to current issues is related to their reactions to the trauma (in other words, examine their traumatic re-enactments).

Sexuality and Intimacy

This is an optional group which is typically led by a female therapist. It is offered once a week and clients are free to drop-in to this group as desired. There is no planned topics. Rather, clients raise topics of importance to them, and as such it also acts as a process group, particularly around issues of sexuality and intimacy.

4. Community Building

12-step meetings

These are not actually offered as part of the PTSR program. However, it is acknowledged by the Homewood clinicians that clients with addiction issues should continue this work while attending the trauma program. Thus, the time spent in 12-step programs such as Alcoholics Anonymous and Narcotics Anonymous was included as part of the total hours spent in community-building activities. Homewood does offer some AA and AlAnon programs at their centre which are open to patients and the outside community as well.

Community Meeting

The is a mandatory meeting which occurs three times per week. Both staff and clients attend. Morning reflections are presented and the community deals with the business of the community in a democratic manner. Announcements of interest to the entire community are made. Volunteers are sought for various tasks in the community which includes welcoming new clients, watering plants, and acting a the librarian for the book collection. Conflictual issues between fellow community members and staff are also discussed at these meetings in order to attempt to bring some resolution to the issue. Examples of issues discussed includes excessive noise and desired program changes.

Community Party

This occurs every Tuesday night (prior to the next days discharges) in honour of the persons who will be leaving the next day. Participation is strongly encouraged but not mandatory. It is seen as a time for the community to come together to celebrate successes and have clients deal with the issue of saying goodbye.

Community Walk

All members of the community (with the exception of those who are physically unable) are required to take a half-hour walk together two mornings a week. This is done in place of the community meeting. It is intended to be an informal time where physical activity is combined with time spent together.

NON-CORE ACTIVITIES

5. Expressive Arts Therapies

Art Therapy

Art therapy is offered as a referral group to persons who would like to explore alternate ways of expressing feelings. It is co-faciliatated by two therapists, an art therapist and another clinician. The sessions are offered in two week blocks and clients are encouraged to strive for some continuity in the themes they are working on in other groups. Often clients explore traumatic images or flashback content. Another common theme is self-image.

The sessions are two hours, the first of which is spent by each individual working with the medium of their choice (paints, pastels, clay). For the second hour the clients come together to share the significance of their art and the feelings associated with it. In this way it is a process-oriented group and could wasily have been included with the other process-oriented activities. However, at the request of the clinicians at Homewood it was kept in a separate category in order to specifically examine the impact of the expressive arts therapies.

Dance Movement Therapy

This group is offered both in a large session as an optional group and once per week as a mandatory session to be done with the other members of your process group. The group is led by a dance movement therapist. The goal is integration of mind and body by increasing body awareness, exploring the five senses, and increasing range of motion. A particular need for trauma survivors is adjusting to sensory experiences in the here and now rather than as memories. Common themes are self-image and restricted range of expression due to the traumatic experience. Clients are also taught how posture affects mood and the perception that others have of them.

This group could also have been included in the activities related to body esteem and body awareness. However, at the request of the clinicians at Homewood it was kept in a separate category in order to specifically examine the impact of the expressive arts therapies.

Finding Your Emotional Voice

This group is designed for persons who are demonstrating a particular difficulty expressing affect. Once identified, these clients are required to attend a thrity minute session each day after the process group. Here they are provided with a range of art materials to express how they are presently feeling. Their experiences are not discussed during this group but as intended to be informative to the participant.

6. Leisure

Craft Zone

Homewood has a well-equipped creative arts studio where clients can work on pottery, ceramics, leathermaking, and painting. Clients can self-select to spend time in the "Craft Zone" during times in the day designated for the PTSR. The goal of these activities is to encourage clients to include recreation/leisure in their daily lives.

Horticultural Therapy

This very popular session is offered once a week by referral only. It is facilitated by a horticultural therapist who consults to all the programs at Homewood. This session is intended to provide clients with another recreation activity as well as enabling to connect spiritually with the living plants. It is believed that often a survivor needs to learn to take care of something else in order to once again be able to care for himself/herself.

Leisure Connection

This referral group is run by a recreation therapist for a total of four sessions. Each client participates in a personal assessment and goal-setting with respect to how to spend some of their leisure time. Clients examine barriers to being able to enjoy leisure (such as the Protestant work ethic and being parentified as a child). The requirement is to try something new as a leisure activity and plan and complete an outing of some sort.

Play Shop

This is an optional weekly drop-in group run by a recreation therapist. It involves the playing of childhood games such as tag and dodge ball. This often stimulates memories on oneself as a child which provides material to be examined in other process-oriented groups.

Recreation & Leisure Activities

These are not necessarily planned activities although there are weekly games of volleyball and bowling available within the Health Centre. Clients were asked to record any activities such as attending movies or shopping in order to gain a sense of how much time was spent in self-directed leisure time. Participating in these activities is viewed as an exercise in self-care.

7. Spirituality

Chapel Services

These are optional and explicitly part of the PTSR. Services from a variety of religious traditions are offered at Homewood throughout the week.

Exploring Spirituality

This is an optional group led by Homewood's Chaplain. It is offered twice a week and clients are free to attend any or all sessions as desired. Topics covered include "why God lets bad things happen to good people", " the nature of sin and evil", "forgiveness". Dicussions are intended to help clients explore their spiritual connectivity and foster enhanced meaning in life.

Mind/Body/Spirit

This group combines a didactic and experiential component and is led by the Dance Movement therapist and the Chaplain. Attendance is optional. The goal is the integration of mind, body and spirit. For example, one topic addressed is perfectionism and how excessively high standards in one's view of himself/herself has an effect on a variety of levels.

8. Individual Interventions

1:1 with Prime

As mentioned in the body of the dissertation, all therapeutic work is intended to take place in the context of the groups. However, each client is assigned a prime nurse therapist for the duration of their stay. Clients can receive some individual "therapy" to

address difficulties they may be having with the program activities or other community members.

Consultations

These are referrals to professionals as necessary such as physicians, dieticians, social workers, and addiction counsellors. Typically these at kept to minimum but are used to support the work the client is doing in the program.

Family/couples counseling

This is typically not offered, often due to distance. Ocassionally it is necessary to offer some family therapy in order to facilitate the return home of client after the program. Typically this is done by a social worker.

Staffings (Reflections)

These are used in the instance where a client is viewed to not be progressing for some reason. The client is called to a meeting to discuss the issues (and as such it is mandatory to attend when such a meeting is called). The meeting is attended by the prime nurse therapist and the therapists who have the most contact with the individual. In rare instances, if the client cannot agree to doing things differently, they are asked to leave the program.

Appendix B
Program Function Model

	Treatment Goals												
	Body Awareness	Coping	Self-care	Safety	PTSD: Intrusive	PTSD: Avoid/Numb	PTSD: Hyperarousal	Non-PTSD Sx	I & E Emotion	Beliefs re Others	Beliefs re Self	Hope	Spirituality/Meaning
1. Body Esteem/Awareness													
Body Esteem Education	X	X	X	X	X	X	X			X	X		
Experiential Body Esteem	X	X							X	X	X	X	
Getting Centered	X	X	X	X	X		X	X					X
2. Didactic & Skill Building													
Coping with Feelings		X	X			X	X		X	X	X		
Discharge planning		X		X						X			
Education Groups		X	X		X	X	X		X	X	X	X	
Family Dynamics		X	X	X					X	X	X		
Life Outside Homewood		X	X	X						X		X	
Skills Groups		X	X	X	X	X	X	X	X	X	X	X	X
Themes & Special Topics			X	X						X	X		
Weekend Planning/Review		X	X	X						X	X		
3. Process-Oriented													
Expressions										X		X	X
Loss Group								X	X	X	X	X	X
Process Group		X	X	X	X	X	X	X	X	X	X	X	
Sexuality and Intimacy	X		X	X	X	x		X		X	X		
4. Community Building													
12-step		X	X	X						X	X		X
Community Meeting				X						X	X		
Community Party										X	X	X	
Community Walk	X		X				X	X					
5. Expressive Arts Therapies													
Art Therapy				X	X	X			X				
Dance Mvmt Therapy (Open)	X		X	X				X	X		X	X	
Finding Your Emotional Voice	X		X	X		X		X	X		X		
6. Leisure													
Craft Zone			X								X		
Horticultural Therapy			X								X	X	X
Leisure Connection		X	X								X		
Play Shop	X		X	X					X	X	X		
Recreation & Leisure Activities		X	X							X	X		
7. Spitiruality													
Chapel Services		X	X										X
Exploring Spirituality										X	X	X	X
Mind/Body/Spirit	X	X							X	X	X	X	X
8. Individual Interventions													
1:1 with Prime	X		X	X				X	X	X			
Consultations			X	X	X	X		X					
Family/couples counseling				X				X	X	X	X	X	
Staffings (Reflections)				X				X					

Appendix C

BAQ - 2

The following are a number of statements which describe attitudes or opinions related to one's body. Please complete each sentence with the <u>one</u> phrase that most closely matches how you feel. Because people are different, there are no right or wrong answers. Circle the letter in front of the phrase that you are selecting.

1. I am:

   a) *always* aware of my body language/ posture
   b) *often* aware of my body language/ posture
   c) *sometimes* aware of my body language/ posture
   d) *rarely* aware of my body language/posture
   e) *never* aware of my body language/ posture

2. I am:

   a) *always* aware of my mood
   b) *often* aware of my mood
   c) *sometimes* aware of my mood
   d) *rarely* aware of my mood
   e) *never* aware of my mood

3. I have:

   a) *never* felt like parts of my body were detached from the rest of me
   b) *rarely* felt like parts of my body were detached from the rest of me
   c) *sometimes* felt like parts of my body were detached from the rest of me
   d) *often* felt like parts of my body were detached from the rest of me
   e) *always* felt like parts of my body were detached from the rest of me

4. I am:

   a) *always* embarrassed by my body
   b) *often* embarrassed by my body
   c) *sometimes* embarrassed by my body
   d) *rarely* embarrassed by my body
   e) *never* embarrassed by my body

5. I find that:

   a) I can *always* tell some important things about a person by how they look
   b) I can *often* tell some important things about a person by how they look
   c) I can *sometimes* tell some important things about a person by how they look
   d) I can *rarely* tell anything important about a person by how they look
   e) I can *never* tell anything important about a person by how they look

6. In terms of how I feel about the way my body reacts physically when I feel stressed:

a) I *always* feel guilty about how my body reacts when stressed
b) I *often* feel guilty about how my body reacts when stressed
c) I *sometimes* feel guilty about how my body reacts when stressed
d) I *rarely* feel guilty about how my body reacts when stressed
e) I *never* feel guilty about how my body reacts when stressed

7. When my body is harmed physically, (either by myself or someone else), I:

a) *never* experience pain
b) *rarely* experience pain
c) *sometimes* experience pain
d) *often* experience pain
e) *always* experience pain

8. I am:

a) *always* aware of pleasurable bodily sensations (smells, tastes, sounds, etc)
b) *often* aware of pleasurable bodily sensations (smells, tastes, sounds, etc)
c) *sometimes* aware of pleasurable bodily sensations (smells, tastes, sounds, etc)
d) *rarely* aware of pleasurable bodily sensations (smells, tastes, sounds, etc)
e) *never* aware of pleasurable bodily sensations (smells, tastes, sounds, etc)

9. My body language/posture:

a) is *very often* an indicator of my mood
b) is *often* an indicator of my mood
c) is *sometimes* an indicator of my mood
d) is *rarely* an indicator of my mood
e) is *very* rarely an indicator of my mood

10. The opinions of other people and the images portrayed in the media:

a) *always* influence how I view my body
b) *often* influence how I view my body
c) *sometimes* influence how I view my body
d) *rarely* influence how I view my body
e) *never* influence how I view my body

11. I feel that:

a) I *never* have control over how I treat or use my body
b) I *rarely* have control over how I treat or use my body
c) I *sometimes* have control over how I treat or use my body
d) I *often* or usually have control over how I treat or use my body
e) I *always* have control over how I treat or use my body

12. My body language/posture:

a) *always* has an impact on how others perceive me
b) *often* has an impact on how others perceive me
c) can *sometimes* have an impact on how others perceive me
d) *rarely* has an impact on how others perceive me
e) is *totally irrelevant* to how others perceive me

13. Physical sensations that I experience (such as stomach aches, rapid heart beat):

a) are *totally irrelevant* to how I'm feeling emotionally
b) are *rarely* an indicator of how I am feeling emotionally
c) are *sometimes* an indicator of how I'm feeling emotionally
d) are *often* an indicator of how I'm feeling emotionally
e) are *always* an indicator of how I'm feeling emotionally

14. In terms of my body's needs (e.g., food, sleep, exercise, etc.):

a) I'm quite aware of my body's needs and try to ensure that I meet them
b) I'm usually aware of my body's needs, but sometimes I ignore them
c) I'm usually aware of my body's needs, but often I ignore them
d) I'm frequently not aware of my body's needs

15. How often are vivid, traumatic memories called up by scents and smells?

a) Vivid, traumatic memories are *always* called up by scents and smells
b) Vivid, traumatic memories are *often* called up by scents and smells
c) Vivid, traumatic memories are *sometimes* called up by scents and smells
d) Vivid, traumatic memories are *rarely* called up by scents and smells
e) Vivid memories are *never* called up by scents and smells

16. How often does it seem that your reactions to present events (i.e. behaviours and feelings) are related to experiences from your past?

a) My reactions to present events are *always* related to my past experiences
b) My reactions to present events are *often* related to my past experiences
c) My reactions to present events are *sometimes* related to my past experiences
d) My reactions to present events are *rarely* related to my past experiences
e) My reactions to present events are *never* related to my past experiences

17. My body language/posture:

a) is *very relevant* to how I feel about myself
b) *rarely* influences how I feel about myself
c) can *sometimes* influence how I feel about myself
d) *often* influences how I feel about myself
e) is *very often* an important influence on how I feel about myself

18. In terms of healing from my traumatic experience(s):,

a) I *absolutely do not* consider my body to be an ally in my healing
b) I *rarely* consider my body to be an ally in healing
c) I *sometimes* consider my body to be an ally in healing, and sometimes not
d) I *often* consider my body to be an ally
e) I *always* consider my body to be an ally in healing

19. The following statement is the most accurate description of how I treat my body:

a) I consider my body an ally and always treat my body well
b) I consider my body an ally and usually treat my body well
c) I consider my body an ally and sometimes treat it well (could do better)
d) I consider my body and ally but don't know how to treat it well
e) I don't consider my body an ally and don't treat it well

These last two questions ask specifically about your attitudes regarding how you reacted physically during your traumatic experience(s). :

20. When I think about my traumatic experience(s):

a) I wasn't responsible for how my body reacted
b) I wish that my body hadn't reacted the way that it did, even though I realize that I couldn't control how I reacted
c) I was responsible for how my body reacted

21. When I think about my traumatic experience(s):

a) I very often feel guilty or ashamed about the way that my body reacted
b) I often feel guilty or ashamed about the way that my body reacted, even though I know that I shouldn't
c) I sometimes feel guilty or ashamed about the way my body reacted
d) I sometimes feel guilty or ashamed about the way that my body reacted, even though I know that I shouldn't
e) I very rarely or never feel guilty or ashamed about the way my body reacted

Appendix D

Table 12a.
Factor Loadings of the Body Attitudes Questionnaire

Item	Factor I (Shame)	Factor II (Awareness)
1. Aware of body language	.46	.15
2. Aware of mood	.21	.51
3. Detached	.38	.17
4. Embarrassed by body	.63	-.17
5. Tell something by how a person looks	-.05	.41
6. Guilty re body reactions to stress	.44	-.26
7. Experience physical pain	.21	.44
8. Aware of pleasurable body sensations	.56	.22
9. Body language is indicative of mood	.06	.52
10. Opinions of others/media images	.49	-.16
11. Control how treat body	.71	.23
12. Body language - others perceptions	-.29	.36
13. Physical sensations indicate emotions	.03	.34
14. Body's needs met	.66	-.07
15. Traumatic memories related to scent/sound	.11	.28
16. traumatic re-enactment	-.07	.15
17. Body language relevant to self perception	-.14	.67
18. Body as ally in healing	.43	.16
19. Treatment of body	.76	-.07
20. Feeling responsible for traumatic event	.04	-.13
21. Guilt/shame for body reactions	.53	-.13

This analysis is based on 138 pre-test questionnaires. The two factors account for 68% of the variance.

Appendix E

Health Questionnaire

Below are 24 statements related to your health. Please read each statement and determine whether or not it is true at the present time. Use the following scale and copy the corresponding number onto the space in front of each question.

1	2	3	4
Very True	**Somewhat True**	**Somewhat False**	**False**

_____ 1. My health condition has restricted my activities.

_____ 2. I've seen a lot of doctors over the years.

_____ 3. Much of the time I don't feel well.

_____ 4. I've had illnesses that my doctors could not explain.

_____ 5. My health problems are very complicated.

_____ 6. I suffer from a lot of pain.

_____ 7. I've had numbness in my body that I can't explain.

_____ 8. It's a struggle for me to get things done with the medical problems I've had.

_____ 9. I am in good health.

_____ 10. I've had episodes of double vision or blurred vision.

_____ 11. My medical problems always seem hard to treat.

_____ 12. I seldom have complaints about how I feel physically.

_____ 13. There have been times when my eyesight gets worse and then better again.

_____ 14. I've had only the usual health problems that most people have.

_____ 15. I have a bad back.

_____ 16. I've had episodes when I've lost the feeling in my hands.

_____ 17. I've had some unusual diseases and illnesses.

_____ 18. I have a weak stomach.

_____ 19. I've had times when my legs become so weak that I couldn't walk.

_____ 20. For my age, my health is pretty good.

_____ 21. I get more headaches than most people.

_____ 22. At times, parts of my body have been paralyzed.

_____ 23. I like to talk with people about their medical problems.

_____ 24. I frequently have diarrhea.

Appendix F

METHODS OF COPING QUESTIONNAIRE

INSTRUCTIONS

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what ***you*** generally do and feel, when you experience stressful events, Obviously, different events bring out somewhat different responses, but think about what you ***usually*** do when you are under a lot of stress.

Also, when responding to the questions, be sure to treat each statement separately from every other statement. Remember that there are no right or wrong answers and so be sure to answer according to what ***you*** usually do rather than what you think "most people do".

Consider the scale below. Choose the number which you feel most closely describes how often you usually engage in each manner of coping. Then put this number on the line in front of the item.

1 = I usually **don't** do this at all.

2 = I usually do this a **little bit**.

3 = I usually do this a **medium amount.**

4 = I usually do this **a lot**

_____1. I try to grow as a person as a result of the experience.

_____2. I turn to work or other substitute activities to take my mind off things.

_____3. I get upset and let my emotions out.

_____4. I try to get advice from someone about what to do.

_____5. I concentrate my efforts on doing something about it.

_____6. I say to myself "this isn't real."

_____7. I put my trust in God.

_____8. I laugh about the situation.

_____9. I admit to myself that I can't deal with it, and quit trying.

_____10. I restrain myself from doing anything too quickly.

_____11. I discuss my feelings with someone.

_____12. I use alcohol or drugs to make myself feel better.

_____13. I get used to the idea that it happened.

_____14. I talk to someone to find out more about the situation.

_____15. I keep myself from getting distracted by other thoughts or activities.

_____16. I daydream about things other than this.

_____17. I get upset, and I am really aware of it.

_____18. I seek God's help.

_____19. I make a plan of action.

_____20. I make jokes about it.

_____21. I accept that this has happened and that it can't be changed.

_____22. I hold off doing anything about it until the situation permits.

_____23. I try to get emotional support from friends or relatives.

_____24. I just give up trying to reach my goal.

_____25. I take additional action to try and get rid of the problem.

_____26. I try to lose myself for a while by drinking alcohol or taking drugs.

_____27. I refuse to believe it happened.

_____28. I let my feelings out.

_____29. I try to see it in a different light.

_____30. I talk to someone who could do something concrete about the problem.

_____31. I sleep more than usual.

_____32. I try to come up with a strategy about what to do.

_____33. I focus on dealing with this problem, and if necessary let other things slide for a while.

_____34. I get sympathy and understanding from someone.

_____35. I drink alcohol or drugs, in order to think about it less.

_____36. I kid around about it.

_____37. I give up the attempt to get what I want.

_____38. I look for something good in what is happening.

_____39. I think about how I might best handle the problem

_____40. I pretend that it hasn't really happened.

_____41. I make sure not to make matters worse by acting too soon.

_____42. I try hard to prevent other things from interfering with my efforts at dealing with this.

_____43. I go to the movies or watch TV, to think about it less.

_____44. I accept the reality of the fact that it happened.

_____45. I ask people who have had similar experiences what they did.

_____46. I feel a lot of emotional distress and I find myself expressing those feelings a lot.

_____47. I take direct action to get around the problem.

_____48. I try to find comfort in my religion.

_____49. I force myself to wait for the right time to do something.

_____50. I make fun of the situation.

_____51. I reduce the amount of effort I'm putting into solving the problem.

_____52. I talk to someone about how I feel.

_____53. I use alcohol or drugs to help me get through it.

_____54. I learn to live with it.

_____55. I put aside other activities in order to concentrate on this.

_____56. I think hard about what steps to take.

_____57. I act as though it hasn't even happened.

_____58. I do what has to be done, one step at a time.

_____59. I learn something from the experience.

_____60. I pray more than usual.

Appendix G

Table 12b.
Factor Loadings of the COPE Subscales

Subscale	Factor I	Factor II	Factor III
Planning	.79	.08	.32
Positive Reinterpretation	.70	.13	.38
Restraint Coping	.52	.29	.04
Active Coping	.78	.32	.11
Supression of Competing Activities	.68	.21	-.18
Acceptance	.64	.19	-.08
Venting	.10	.60	-.52
Seeking Social Support: Emotional	.03	.71	-.38
Seeking Social Support: Instrumental	.15	.79	-.23
Religion	.15	.57	-.36
Mental Disengagement	-.30	.05	.71
Behavioiural Disengagement	-.20	-.17	.53
Denial	-.29	-.16	.70
Alcohol*	.00	-.27	.13
Humour*	-.01	-.04	.25

*Note: This analysis is based on 138 pre-test questionnaires. Alcohol and Humour did not load well on any of the three factors. This is consistent with the factor analysis reported by Carver et al. (1985). These authors regard these two subscales as experimental and still under investigation. Thus, they were not used in the present research.

Appendix H

TSI Belief Scale - CS

This questionnaire is used to learn how individuals view themselves and others. As people differ from one another in many ways, there are no right or wrong answers. Please place next to each item the number from the scale below which you feel most closely matches your own beliefs about yourself and your world. Try to complete every item.

1	2	3	4	5	6
Disagree strongly	**Disagree**	**Disagree somewhat**	**Agree somewhat**	**Agree**	**Agree strongly**

____ 1. I generally feel safe from danger.
____ 2. People are wonderful.
____ 3. I can comfort myself when I am in pain.
____ 4. I find myself worrying a lot about my safety.
____ 5. I don't feel like I deserve much.
____ 6. I can usually trust my own judgment.
____ 7. I feel empty when I am alone.
____ 8. I have had a lot of bad feelings about myself.
____ 9. I'm reasonably comfortable about the safety of those I care about.
___ 10. Most people destroy what they build.
___ 11. I have a difficult time being myself around other people.
___ 12. I enjoy my own company.
___ 13. I don't trust my instincts.
___ 14. I often think the worst of others.
___ 15. I believe I can protect myself if my thoughts become self-destructive.
___ 16. You can't trust anyone.
___ 17. I'm uncomfortable when someone else is leading the group.
___ 18. I feel good about myself most days.
___ 19. Sometimes I think I'm more concerned about the safety of others than they are.
___ 20. Other people are no good.
___ 21. Sometimes when I'm with people, I feel disconnected.
___ 22. People shouldn't place too much trust in their friends.
___ 23. Mostly, I don't feel like I'm worth much.
___ 24. I don't have much control in my relationships.
___ 25. My capacity to harm myself scares me sometimes.

1 Disagree strongly	2 Disagree	3 Disagree somewhat	4 Agree somewhat	5 Agree	6 Agree strongly

___ 26. For the most part, I like other people.

___ 27. I deserve to have good things happen to me.

___ 28. I usually feel safe when I am alone.

___ 29. If I really need them, people will come through for me.

___ 30. I can't stand to be alone.

___ 31. This world is filled with emotionally disturbed people.

___ 32. I am basically a good person.

___ 33. For the most part, I can protect myself from harm.

___ 34. Bad things happen to me because I am bad.

___ 35. Some of my happiest experiences involve other people.

___ 36. There are many people to whom I feel close and connected.

___ 37. Sometimes I'm afraid of what I might do to myself.

___ 38. I am often involved in conflicts with other people.

___ 39. I often feel cut off and distant from other people.

___ 40. I worry a lot about the safety of loved ones.

___ 41. I don't experience much love from anyone.

___ 42. Even when I'm with other people, I feel alone.

___ 43. There is an evil force inside of me.

___ 44. I feel uncertain about my ability to make decisions.

___ 45. When I'm alone, I don't feel safe.

___ 46. When I'm alone, it's like there's no one there.

___ 47. I can depend on my friends to be there when I need them.

___ 48. Sometimes I feel like I can't control myself.

___ 49. I feel out of touch with people.

___ 50. Most people are basically good at heart.

___ 51. I sometimes wish I didn't have any feelings.

___ 52. I'm often afraid I will harm myself.

___ 53. I am my own best friend.

___ 54. I feel able to control whether I harm others.

1	2	3	4	5	6
Disagree strongly	**Disagree**	**Disagree somewhat**	**Agree somewhat**	**Agree**	**Agree strongly**

___ 55. I often feel helpless in my relationship with others.
___ 56. I don't have a lot of respect for people closest to me.
___ 57. I enjoy feeling like part of my community.
___ 58. I look forward to time I spend alone.
___ 59. I often feel others are trying to control me.
___ 60. I envy other people who are always in control.
___ 61. The important people in my life are relatively safe from danger.
___ 62. The most uncomfortable feeling for me is losing control over myself.
___ 63. If people really knew me, they wouldn't like me.
___ 64. Most people don't keep the promises they make.
___ 65. Strong people don't need to ask for others' help.
___ 66. Trusting other people is generally not very smart.
___ 67. I fear my capacity to harm others.
___ 68. I feel bad about myself when I need others' help.
___ 69. To feel at ease, I need to be in charge.
___ 70. I have sound judgment.
___ 71. People who trust too much are foolish.
___ 72. When my loved ones aren't with me, I fear I may be in danger.
___ 73. At times my actions pose a danger to others.
___ 74. I feel confident in my decision-making ability.
___ 75. I can't work effectively unless I am the leader.
___ 76. I often doubt myself.
___ 77. I can usually size up situations pretty well.
___ 78. I generally don't believe things people tell me.
___ 79. Sometimes I really want to hurt someone.
___ 80. When someone suggests I relax, I feel anxious.

Appendix I

Participant ID # _____ Date: _____

M-PTSD-SS Self Report Version

The purpose of this scale is to measure the frequency and severity of symptoms in the past two weeks. Using the scale listed below, please indicate the frequency of symptoms to the left of each item. Then indicate the severity beside each item by circling the letter that fits you best.

FREQUENCY		SEVERITY	
0	**Not at all**	A	**Not at all distressing**
1	**Once per week or less/ a little bit/ once in a while**	B	**A little bit distressing**
2	**2 to 4 times per week/ somewhat/ half the time**	C	**Moderately distressing**
3	**5 or more times per week/ very much/ almost always**	D	**Quite a bit distressing**
		E	**Extremely distressing**

FREQUENCY		SEVERITY
_____1.	Have you had recurrent or intrusive distressing thoughts or recollections about your traumatic experience(s)?	A B C D E
_____2.	Have you been having recurrent bad dreams or nightmares about your traumatic experience(s)?	A B C D E
_____3.	Have you had the experience of suddenly reliving your traumatic experience(s), flashbacks of it, acting or feeling as if it were occurring?	A B C D E
_____4.	Have you been intensely emotionally upset when reminded of your traumatic experience(s), including experiences known as anniversary reactions?	A B C D E
_____5.	Have you persistently been making efforts to avoid thoughts or feelings associated with your traumatic experience(s)?	A B C D E
_____6.	Have you persistently been making efforts to avoid activities, situations or places that remind you of your traumatic experience(s)?	A B C D E
_____7.	Are there any important aspects of your traumatic event that you cannot recall?	A B C D E

	FREQUENCY		SEVERITY
0	**Not at all**	**A**	**Not at all distressing**
1	**Once per week or less/ a little bit/ once in a while**	**B**	**A little bit distressing**
2	**2 to 4 times per week/ somewhat/ half the time**	**C**	**Moderately distressing**
		D	**Quite a bit distressing**
3	**5 or more times per week/ very much/ almost always**	**E**	**Extremely distressing**

FREQUENCY		SEVERITY
_____8.	Have you markedly lost interest in free time activities?	A B C D E
_____9.	Have you felt detached or cut off from others around you?	A B C D E
_____10.	Have you felt that your ability to experience emotions is less (e.g. unable to have loving feelings, do you feel numb, can't cry when sad, etc.)?	A B C D E
_____11.	Have you felt that any future plans or hopes have changed because of your traumatic experience(s)?	A B C D E
_____12.	Have you been having persistent difficulty falling or staying asleep?	A B C D E
_____13.	Have you been continuously irritable or having outburst of anger?	A B C D E
_____14.	Have you been having persistent difficulty concentrating?	A B C D E
_____15.	Are you overly alert (e.g. check to see who is around you, etc.)?	A B C D E
_____16.	Have you been jumpier, more easily startled?	A B C D E
_____17.	Have you been having intense physical reactions (e.g. sweaty, heart palpitations) when reminded of your traumatic experience(s)?	A B C D E

PLEASE TURN TO THE NEXT PAGE.

Appendix J

TSI-2

This questionnaire contains 100 items describing experiences that may or may not have happened to you. Please circle the one answer that best describes how often each of the following experiences have happened since you began *the Program for Traumatic Stress Recovery (PTSR).*

Circle 0 if your answer is NEVER: it has not happened at all	0	1	2	3
Circle 1 or 2 if it has happened, but not often	0	1	2	3
	0	1	2	3
Circle 3 if your answer if OFTEN.	0	1	2	3

Since beginning the PTSR, how often have each of the following occurred:

1.	Nightmares or bad dreams	0	1	2	3
2.	Trying to forget about a bad time in your life.	0	1	2	3
3.	Irritability.	0	1	2	3
4.	Stopping yourself from thinking about the past.	0	1	2	3
5.	Getting angry about something that wasn't very important	0	1	2	3
6.	Feeling empty inside	0	1	2	3
7.	Sadness	0	1	2	3
8.	Flashbacks (sudden memories or images of upsetting things)	0	1	2	3
9.	Not being satisfied with your sex life/	0	1	2	3
10.	Feeling like you were outside your body	0	1	2	3
11.	Lower back pain	0	1	2	3
12.	Sudden disturbing memories when you were not expecting them	0	1	2	3
13.	Wanting to cry	0	1	2	3
14.	Not feeling happy	0	1	2	3
15.	Becoming angry for little or no reason	0	1	2	3
16.	Feeling like you don't know who you really are	0	1	2	3
17.	Feeling depressed	0	1	2	3
18.	Having sex with someone you hardly knew	0	1	2	3
19.	Thoughts or fantasies about hurting someone	0	1	2	3
20.	Your mind going blank	0	1	2	3
21.	Fainting	0	1	2	3
22.	Periods of trembling or shaking	0	1	2	3
23.	Pushing painful memories out of your mind	0	1	2	3
24.	Not understanding why you did something	0	1	2	3
25.	Threatening or attempting suicide	0	1	2	3
26.	Feeling like you were watching yourself from far away	0	1	2	3
27.	Feeling tense or "on edge"	0	1	2	3
28.	Getting into trouble because of sex	0	1	2	3
29.	Not feeling like yourself	0	1	2	3
30.	Wishing you were dead	0	1	2	3
31.	Worrying about things	0	1	2	3
32.	Not being sure of what you want in life	0	1	2	3
33.	Bad thoughts or feelings during sex	0	1	2	3
34.	Being easily annoyed by other people	0	1	2	3
35.	Starting arguments or picking fights to get your anger out	0	1	2	3

36.	Having sex or being sexual just to keep from feeling lonely or sad	0	1	2	3
37.	Getting angry when you didn't want to	0	1	2	3
38.	Not being able to feel your emotions	0	1	2	3
39.	Confusion about your sexual feelings	0	1	2	3
40.	Using drugs other than marijuana	0	1	2	3
41.	Feeling jumpy	0	1	2	3
42.	Absent-mindedness	0	1	2	3
43.	Feeling paralyzed for minutes at a time	0	1	2	3
44.	Needing other people to tell you what to do	0	1	2	3
45.	Yelling or telling other people off when you thought you shouldn't have	0	1	2	3
46.	Flirting or "coming on" to someone to get attention	0	1	2	3
47.	Sexual thoughts or feelings when you thought you shouldn't have them	0	1	2	3
48.	Intentionally hurting yourself (for example by scratching, cutting or burning) even though you weren't trying to commit suicide	0	1	2	3
49.	Aches and pains	0	1	2	3
50.	Sexual fantasies about being dominated or overpowered	0	1	2	3
51.	High anxiety	0	1	2	3
52.	Problems in your sexual relations with another person	0	1	2	3
53.	Wishing you had more money	0	1	2	3
54.	Nervousness	0	1	2	3
55.	Getting confused about what you thought or believed	0	1	2	3
56.	Feeling tired	0	1	2	3
57.	Feeling mad or angry inside	0	1	2	3
58.	Getting into trouble because of your drinking	0	1	2	3
59.	Staying away from certain people or places because they reminded you of something	0	1	2	3
60.	One side of your body going numb	0	1	2	3
61.	Wishing you could stop thinking about sex	0	1	2	3
62.	Suddenly remembering something upsetting from your past	0	1	2	3
63.	Wanting to hit someone or something	0	1	2	3
64.	Feeling hopeless	0	1	2	3
65.	Hearing someone talk to you who wasn't really there	0	1	2	3
66.	Suddenly being reminded of something bad.	0	1	2	3
67.	Trying to block out certain memories	0	1	2	3
68.	Sexual problems	0	1	2	3
69.	Using sex to feel powerful or important	0	1	2	3
70.	Violent dreams	0	1	2	3
71.	Acting "sexy" even though you really didn't want sex	0	1	2	3
72.	Just for a moment, seeing or hearing something upsetting that happened earlier in your life	0	1	2	3
73.	Using sex to get love or attention	0	1	2	3
74.	Frightening or upsetting thought popping into your mind	0	1	2	3
75.	Getting you own feelings mixed up with someone else's	0	1	2	3
76.	Wanting to have sex with someone who you knew was bad for you 0	1	2	3	
77.	Feeling ashamed about your sexual feelings or behaviour	0	1	2	3
78.	Trying to keep from being alone	0	1	2	3
79.	Losing your sense of taste	0	1	2	3

80.	Your feelings or thought changing when you were with other people	0	1	2	3
81.	Having sex that had to be kept secret from other people	0	1	2	3
82.	Worrying that someone is trying to steal your ideas	0	1	2	3
83.	Not letting yourself feel bad about the past	0	1	2	3
84.	Feeling like things weren't real	0	1	2	3
85.	Feeling like you were in a dream	0	1	2	3
86.	Not eating or sleeping for two days or more	0	1	2	3
87.	Trying not to have nay feelings about something that once hurt you	0	1	2	3
88.	Daydreaming	0	1	2	3
89.	Trying not to think or talk about things in your life that were painful	0	1	2	3
90.	Feeling like life wasn't worth living	0	1	2	3
91.	Being startled or frightened by sudden noises	0	1	2	3
92.	Seeing people from the spirit world	0	1	2	3
93.	Trouble controlling your temper	0	1	2	3
94.	Being easily influenced by people	0	1	2	3
95.	Wishing you didn't have any sexual feelings	0	1	2	3
96.	Wanting to set fire to a public building	0	1	2	3
97.	Feeling afraid you might die or be injured	0	1	2	3
98.	Feeling so depressed that you avoided people	0	1	2	3
99.	Thinking that someone was reading your mind	0	1	2	3
100.	Feeling worthless	0	1	2	3

Appendix K

Table 12c
Factor Loadings for the Trauma Symptom Inventory (Briere, 1995)

Subscale	Factor I (Generalized Traumatic Distress)	Factor II (Self- Regulation)
Anxious Arousal	.59	-.15
Anger/Irritability	.63	.24
Defensive Avoidance	.71	-.27
Depression	.64	-.28
Dissociation	.80	-.24
Impaired Self Reference	.74	.05
Destructive Self Behaviours	.54	.67
Sexual Concerns	.17	.45
Tension Reduction Behaviours	.42	.69

Note: This analysis is based on 138 pre-test questionnaires. The two factors account for 61.6% of the variance.

Appendix L

TAS - 20

Using the scale provided as a guide, indicate how much you agree or disagree with each of the following statements. Please write the number from the scale on the line in front of each question.

1	2	3	4	5
Strongly Disagree	***Moderately Disagree***	***Neither Agree nor Disagree***	***Moderately Agree***	***Strongly Agree***

_____1. I am often confused about what emotion I am feeling.

_____2. It is difficult for me to find the right words for my feelings.

_____3. I have physical sensations that even doctors don't understand.

_____4. I am able to describe my feelings easily.

_____5. I prefer to analyze problems rather than just describe them.

_____6. When I am upset, I don't know if I am sad, frightened, or angry.

_____7. I am often puzzled by sensations in my body.

_____8. I prefer to just let things happen rather than to understand why they turned out that way.

_____9. I have feelings that I can't quite identify.

_____10. Being in touch with emotions is essential.

_____11. I find it hard to describe how I feel about people.

_____12. People tell me to describe my feelings more.

_____13. I don't know what is going on inside me.

_____14. I often don't know why I am angry.

_____15. I prefer talking to people about their daily activities rather than their feelings.

_____16. I prefer to watch "light" entertainment shows rather than psychological dramas.

_____17. It is difficult for me to reveal my innermost feelings, even to close friends.

_____18. I can feel close to someone, even in moments of silence.

_____19. I find examination of my feelings useful in solving personal problems.

_____20. Looking for hidden meanings in movies or plays distracts from their enjoyment.

Appendix M

Table 12d.
Factor Loadings of the TSI Belief Scale

Subscale	Factor I (Self)	Factor II (Other)
Self - Esteem	.81	.19
Self - Intimacy	.57	.37
Self - Trust	.71	.42
Self - Control	.75	-.01
Other - Esteem	-.34	.73
Other - Intimacy	-.06	.80
Other - Trust	-.36	.79
Other - Control	-.37	.57

Note: This analysis is based on 138 pre-test questionnaires. The two factors account for 64.4% of the variance

Appendix N

BHS

This questionnaire consists of 20 statements. Please read the statements carefully one by one. If the statement describes your attitude for the **past week including today,** circle the 'T' indicating TRUE in the column next to the statement. If the statement does not describe your attitude, circle the 'F' indicating FALSE in the column next to this statement. **Please be sure to read each statement carefully.**

1. I look forward to the future with hope and enthusiasm. ..... T F
2. I might as well give up because there is nothing I can do about making things better for myself. ..... T F
3. When things are going badly, I am helped by knowing that they cannot stay that way forever. ..... T F
4. I can't imagine what my life would be like in ten years. ..... T F
5. I have enough time to accomplish the things I want to do. ..... T F
6. In the future, I expect to succeed in what concerns me most. ..... T F
7. My future seems dark to me. ..... T F
8. I happen to be particularly lucky, and I expect to get more of the good things in life than the average person. ..... T F
9. I just can't get the breaks, and there's no reason I will in the future. ..... T F
10. My past experiences have prepared me well for the future. ..... T F
11. All I can see ahead of me is unpleasantness rather than pleasantness. ..... T F
12. I don't expect to get what I really want. ..... T F
13. When I look ahead to the future, I expect that I will be happier than I am now. ..... T F
14. Things just don't work out the way I want them to. ..... T F
15. I have great faith in the future. ..... T F
16. I never get what I want, so it's foolish to want anything. ..... T F
17. It's very unlikely that I will get any real satisfaction in the future. ..... T F
18. The future seems vague and uncertain to me. ..... T F
19. I can look forward to more good times than bad times. ..... T F
20. There's no use in really trying to get anything I want because I probably won't get it. ..... T F

Appendix O

PTGI-1

In addition to the negative impacts of experiencing trauma. some individuals have found the following changes occurring in their lives as a result of their recovery. Indicate for each of the statements below the degree to which this change **occurred as a result of your participation in the Program for Traumatic Stress Recovery.** Please use the following scale and write the number from the scale on the line in front of each question.

0	1	2	3	4	5
I did not experience this change	**to a very small degree**	**to a small degree**	**to a moderate degree**	**to a great degree**	**I experienced this change to a very great degree**

_____1. My priorities about what is important in life.

_____2. An appreciation for the value of my own life.

_____3. I developed new interests.

_____4. A feeling of self-reliance.

_____5. A better understanding of spiritual matters.

_____6. Knowing that I can count on people in times of trouble.

_____7. I established a new path for my life.

_____8. A sense of closeness with others.

_____9. A willingness to express my emotions.

_____10. Knowing I can handle difficulties.

_____11. I'm able to do better things with my life.

_____12. Being able to accept the way things work out.

_____13. Appreciating each day.

_____14. New opportunities are available which wouldn't have been otherwise.

_____15. Having compassion for others.

_____16. Putting efforts into relationships.

_____17. I'm more likely to try to change things which need changing.

_____18. I have a stronger religious faith.

_____19. I discovered that I'm stronger than I thought I was.

_____20. I learned a great deal about how wonderful people are.

_____ 21. I accept needing others.

Appendix P

Community-Oriented Programs Environment Scale

Below are 40 statements which could describe the atmosphere of the community in the *Program for Traumatic Stress Recovery*. Please read each statement and indicate whether you agree or disagree with the statement by either circling T (True) or F (False). Please answer every question.

1. Members of the community put a lot of energy into what they do. T F
2. The healthier community members here help take care of the less healthy ones. T F
3. Community members tend to hide their feelings from one another. T F
4. There is no membership government in this program. T F
5. This program emphasizes activities of daily living. T F
6. Community members hardly ever discuss their sexual lives. T F
7. It's hard to get people to argue around here T F
8. Community members' activities are carefully planned. T F
9. If a community member breaks a rule, s/he knows what the consequences will be T F
10. Once a schedule is arranged for a community member, the member must follow it. T F
11. This is a lively place. T F
12. Staff here have relatively little time to encourage members of the community. T F
13. Community members say anything they want to the staff T F
14. Community members can leave here anytime they want without saying where they are going T F
15. There is relatively little emphasis on teaching members solutions to practical problems. T F
16. Personal problems are openly talked about T F
17. Community members often criticize or joke about the staff T F
18. This is a very well organized program T F
19. If a community member's program is changed, staff always tell him/her why T F
20. The staff very rarely punish community members by taking away their privileges. T F
21. The community members are proud of this program T F

22. Community members seldom help each other. ..... T F

23. It is hard to tell how community members are feeling here ..... T F

24. Community members are expected to take leadership here. ..... T F

25. Community members are expected to make detailed specific plans for the future. .. T F

26. Community members are rarely asked personal questions by the staff. ..... T F

27. Staff sometimes argue openly with one another. ..... T F

28. The staff make sure this place is always neat ..... T F

29. Staff rarely give members a detailed explanation of what the program is about. ..... T F

30. Community members who break the rules are often punished for it. ..... T F

31. There is very little group spirit in this program. ..... T F

32. Staff are very interested in following up members once they leave the program. ..... T F

33. Community members are careful about what they say when staff are around. ..... T F

34. The staff tend to discourage criticism from members ..... T F

35. There is relatively little discussion about exactly what members will be doing after they leave the program ..... T F

36. Community members are expected to share their personal problems with each other. ..... T F

37. Staff sometimes argue openly with one another. ..... T F

38. This place usually looks a little messy ..... T F

39. The program rules are clearly understood by the members. ..... T F

40. If a community member fights with another member, s/he will get into real trouble with the staff. ..... T F

Appendix Q

Community Experiences Interview

1. What was your experience of living in the therapeutic community like?

2. Was it helpful/advantageous to be exposed to others who are recovering from traumatic events?

3. Was there anything unhelpful/disadvantageous about being in community with other trauma survivors?

4. What do you see as the advantages/disadvantages of structuring the community so that people at various stages in the program are all together at once?

5. Was there anything about your personal characteristics (e.g. gender, religion, race) that you found made it easier for you to feel a part of the community Yes No
If yes, please describe

6. Was there anything about your personal characteristics (e.g. gender, religion, race) that you found made it more difficult for you to feel a part of the community Yes No
If yes, please describe

7. Was there anything in particular that happened to you during your stay on the Survivors Unit that had a particularly positive impact on you? Yes No
If yes, please describe

8. Was there anything in particular that happened to you during your stay on the Survivors unit that had a particularly negative impact on you? Yes No
If yes, please describe

9. Was there anything in particular that happened to another community member during your stay that had a particularly positive impact on you? Yes No
If yes, Please describe

10. Was there anything in particular that happened to another community member during your stay that had a particularly negative impact on you? Yes No
If yes, Please describe

Appendix R

SCORING CRITERIA -- INTERVIEW DATA

Q1 : What was your experience of living in the therapeutic community like?

2: enthusiastically positive, 2 or more positive aspects stated
1: generally positive, some qualification to experience, 1 positive aspect stated
0: neutral - negatives expressed which negate positive
-1 one mildly negative aspect expressed
-2 very negative, 2 or more negatives/ no positives expressed

Q2: Was it helpful/advantageous to be exposed to others who are recovering from traumatic events?

2: enthusiastically positive, 2 or more positive aspects stated
1: generally positive, some qualification to expereince, 1 positive aspect stated
0: neutral - negatives expressed which negate positive
-1 one mildly negative aspect expressed
-2 very negative, 2 or more negatives /no positives expressed

Q3: Was there anything uphelpful/disadvantageous about being in community with other trauma survivors?

2 Nothing
1
0 States a negative but then qualifies/normalizes
-1 one negative aspect, mildly stated
-2 2 or more negatives, 1 stated strongly indicating major negative

Q4: Structure of community

2 Advantages only
1 one minor advantage
0 equal weight given to advantages and disadvantages
-1 one disadvantage stated mildly
-2 2 or more disadvantages, strongly stated

Q5: Personal characteristics: easier

2 embrace concept, able to articulate ways felt belongingness in community
1 a tentative or mildly stated example
0 Nothing stated

Q6: Personal characteristics: Difficult

2 No/none
1
0 initial difficulty expressed, overcome
-1 Characteristic mildly stated
-2 Major example of feeling excluded for personal reasons

Q7: Positive personal expereince

2 1 or more clearly articulated positive aspects
1 1 vaguely articulated positive experience
0 neutral
-1 cannot report anything positive
-2 reports there was definitley nothing positive

Q8: Negative Personal Experience

2 Nothing reported
0 Negative experience reported, neutralized
-1 Mildly negative, discusses some resolution attempt
-2 Very negative, unresolved

Q9: Other Positive Experience
2 very positive experience articulated
1 vague, positive experiences articulated
0 nothing

Q10 Other Negative Experience
-2 negative experience, unresolved
-1 mildly negative, some resolution
0 negative reported; resolution stated
2 nothing/none

Ending Comments

2: enthusiastically positive, 2 or more positive aspects stated
1: generally positive, some qualification to experience, 1 positive aspect stated
0: neutral - negatives expressed which negate positive
-1 one mildly negative aspect expressed
-2 very negative, no positives expressed

Participant ID # _____ Appendix S Date_____

PERSONAL HISTORY QUESTIONNAIRE

Please complete the following information as completely and honestly as possible. **The information will be held in the strictest confidence.** You have been assigned a code number in order that your name does not appear anywhere on this questionnaire.

Age_____ Gender_____ Occupation_____

1. On what date were you admitted to the program? _____

2. What is your expected discharge date?_____

3. Are you currently taking any medication? Yes No

   If yes, please specify the names and dosages_____

   _____

   _____

4. Is this your first time participating in the *Program for Traumatic Stress Recovery* at Homewood (including when it was formerly known as the *Survivors* Program) ? Yes No

   If no, is this your 2nd 3rd 4th 5th time? (please circle)

5. Prior to enrolling in the Program for Traumatic Stress Recovery, how have you tried to deal with the after-effects of your traumatic experience? (Please check all that apply)

   _____individual counselling _____ talking to friend and/or family

   _____group counselling _____reading books on own

6. In terms of a number of years, how long would you estimate that you have been actively trying to deal with the aftermath of your traumatic experience?_____

7. Have you ever been an inpatient in a mental health facility prior to attending the Program for Traumatic Stress Recovery? Yes No
   If yes, when and for how long?_____

   _____

8. What was the nature of your traumatic experience? Please circle all that apply. Please indicate the age at which your traumatic experience occurred on the line provided beside each item.

Age

a) abuse during childhood (emotional, physical, sexual, verbal); _____

b) abuse during adulthood (emotional, physical, sexual, verbal); _____

c) criminal victimization (such as assault, kidnapping, rape, robbery), but other than that included in part a) or part b); _____

d) natural disaster (such as flood, hurricane, major earthquake, tornado); _____

e) man-made disaster (such as chemical spills, nuclear reactor accidents); _____

f) motor vehicle or other serious accident; _____

g) military combat exposure; _____

h) witness to someone being seriously injured or violently killed; _____

i) work-related trauma (such as fire-fighting, police work); _____

9. Are you currently experiencing any of the following difficulties:? (Please check all that apply)

_____	addiction to alcohol or drugs	_____	anxiety/panic attacks
_____	bipolar mood disorder	_____	depression
_____	eating disorder	_____	periods of dissociation

10. How much would you estimate that difficulties relating to your traumatic experience is hampering you from living the life that you would like to be leading. Please place an X on the line below to indicate your estimate.

0----------100

a little bit

I cannot live a normal life

Appendix T

Weekly Activity Log

Participant I.D. # _____ *Week Ending*_____

Please indicate which of the following activities you participated in during the past week by circling the Yes or No opposite each activity and answering the frequency and topic questions where appropriate. These forms are due each Friday . This information is being gathered for research purposes only and will be kept confidential. **Please deposit in the box labeled "PTSR Study" each Friday.**

1:1 with Prime	Yes	No	How much time ? _____ minutes
12-step Programs	Yes	No	
Art Therapy	Yes	No	
Body Esteem	Yes	No	
Chapel Services	Yes	No	
Craft Zone	Yes	No	
Community Meeting	Yes	No	How many did you attend? _____
Community Party	Yes	No	
Community Walk	Yes	No	How many times? _____
Consultations	Yes	No	
Coping with Feelings	Yes	No	
Discharge Process/ Planning	Yes	No	
Education Group	Yes	No	Topic? _____
Exploring Spirituality	Yes	No	
Expressions (closure group)	Yes	No	
Family/Couples Counseling	Yes	No	
Family Dynamics	Yes	No	Topic? _____
Family & Friends Info Night	Yes	No	
Finding Your Emotional Voice	Yes	No	
Getting Centered	Yes	No	
Horticultural Therapy	Yes	No	
Leisure Connections	Yes	No	Topic? _____
Life Outside Homewood	Yes	No	
Loss Group	Yes	No	
Play Shop	Yes	No	
Process Group	Yes	No	How many did you attend? _____
Recreation & Leisure Activities	Yes	No	What activities?_____
Reflections (Staffings)	Yes	No	
Sexuality and Intimacy	Yes	No	

Skills Group	Yes	No	Topic? _____
T.G.I.F./Weekend Planning	Yes	No	
Themes and Special Topics	Yes	No	Topic? _____
Weekend Review Yes No			

Appendix U

UNIVERSITY OF WATERLOO - Department of Psychology
DECLARATION OF INFORMED CONSENT

I, _____ (please print name) give my informed consent to participate in the outcome study of Homewood's Program for Traumatic Stress Recovery conducted by Kris Isotupa under the supervision of Dr. Karen Korabik (of the Department of Psychology, University of Guelph).

(a) I have received a Letter of Information in which I was informed of the general purpose of the research. I am aware that the research is designed to study the impact of the program on participant's symptoms and beliefs related to their traumatic experience. I understand that I will be requested to complete various questionnaire measures and a short interview. Most questionnaires will be administered by Kris Isotupa, while two others will be administered by Homewood personnel.

(b) I understand that some of the measures I will complete during assessment week as part of the program are also required for research purposes. I authorize Homewood to release summary scores to the researchers (Kris Isotupa and the psychology professors supervising her work). I understand that these scores will be identified by code number only. I have been informed that the researchers will not have access to my clinical record.

(c) I understand that my decision to participate (or withdraw from the study) will not influence the treatment I receive in any way.

(d) I understand that although a record will be kept of my having participated in the study, ALL data collected from my participation will be identified by number only and be kept strictly confidential. Information collected as part of assessment and treatment will become part of my clinical record (and shared with the researchers only as per point b).

(e) I have been informed that I may refuse to answer any question that I do not wish to answer.

(f) I consent to the publication of the research results with the understanding that the information is anonymous and reported in group form only. This means that no individual identification can be made.

(g) I understand that my participation is voluntary and I am free to withdraw from the study at any time without penalty of any kind.

(h) I have had a reasonable amount of time to consider whether to participate in this study, and to discuss it with anyone I wished.

Concerns about any aspects of this study may be referred to Dr. Susan Sykes, Office of Human Research and Animal Care, University of Waterloo (519) 885-1211 ext. 6005.

_____ _____

(Participant's Signature) (Date) (Signature of Witness - optional)

_____

(Researcher's Signature) (Date)

Outcome Study of the Homewood Program for Traumatic Stress Recovery

Letter of Information

Dear Client:

Let me take this opportunity to introduce myself. My name is Kris Isotupa and I am working on obtaining my Ph.D. in Clinical Psychology from the University of Waterloo under the supervision of Dr. Karen Korabik who is at the University of Guelph. I would like to enlist your help with my research project.

In collaboration with the staff of the *Program for Traumatic Stress Recovery*, I am interested in determining the impact of the program on participants with respect to their symptoms and beliefs about themselves and their traumatic experiences. This study is important because it examines the mechanisms responsible for healing and looks at this healing in the context of a therapeutic community. The results will provide valuable information that will help to continually improve the program for fellow survivors.

I would very much like you to join me in this research project which is jointly sponsored by the University of Waterloo and the University of Guelph. Please find below a description of the type of information that would be collected if you decide to participate.

Project participants will be asked to complete several questionnaires. Most of these questionnaires will be administered by myself. Two will be administered by Homewood personnel as part of the assessment week activities. The questionnaires ask for brief demographic information about yourself, your activities, and your medical history. The purpose of this is to get an idea of the degree of difficulty you have been having as a result of your traumatic experience. There are also questionnaires which ask about symptoms you may be having, as well as your beliefs about the impact of the trauma on your life. You may find some of the questions to be of a sensitive nature. Please be assured that you may decline to answer any questions as you see fit.

It is also important to note that all information collected will be kept in the strictest confidence. Your data will be identified by code number only so that your name does not appear on any of the materials. Also, the researchers will not have access to your clinical record. Rather, the information that was collected by Homewood personnel that is also being used for research will be transfered by these clinicans to summary sheets. Again all of this data will be identified by code number only.

Because this study aims to compare people's trauma-related symptoms and beliefs before and after completing the program, it important to collect some of this information at various points in time. At the moment I am requesting that you complete this information while you are waiting to be admitted to the program. You will also be asked to complete questionnaires when you first arrive at Homewood and at the end of your stay. I will also be meeting with you for a short interview towards the end of your stay. Finally, questionnaires

will be mailed to you four months after completion of the program. If you decide to participate, I will be asking you for your current address prior to leaving the program.

Each questionnaire package should take approximately one hour to complete, and the interview would be approximately one half hour. So, in total I am requesting approximately five hours of your time.

This project has been approved by the Ethics Review Board at the University of Waterloo and by Homewood. Again, please be assured that all information gathered will be keep confidential, and will not impact your treatment in the program in any way. Also, if you decide not to participant, this will not impact the course of your treatment either. Participation is voluntary and you are free to withdraw from the project at any time, even after your consent has been given.

If you have decided to participate in this study, please complete the attached Consent Form and Questionnaire Package and return them in the enclosed return envelope.

If you have any questions about my project, please do not hesitate to call me at (519) 763-0205. You may also reach Dr. Korabik at (519) 824-4120 ext. 3188. Thank you for your time and consideration. I look forward to working with you.

Kris Isotupa, Ph.D. Candidate
Department of Psychology
University of Waterloo

Appendix V

Outcome Study of the Program for Traumatic Stress Recovery

Feedback Letter for Study Participants

Dear Participant:

I would like to take this opportunity to thank you for your time and dedication in completing the multitude of questionnaires for my study. I realize that it was a large time commitment. Quite obviously, I couldn't have done the study without you!

As mentioned in the Letter of Information, the purpose of the study was to determine the impact of the program on participants with respect to their symptoms and beliefs about themselves and their traumatic experiences. This study is important because it examines the mechanisms responsible for healing and looks at this healing in the context of a therapeutic community. The results will provide valuable information that will help to continually improve the program for fellow survivors.

While the final results are not ready because I am still collecting data, I can give you a sense of what some of the questions we were trying to answer were. You may be interested to know that the clinicians at Homewood have identified the following treatment goals of the program

- Clients will learn the skills necessary to maintain physical, emotional and relational safety.
- Clients will engage in self-care activities
- Clients will demonstrate an ability to engage in activities of daily living
- Clients will experience a reduction in symptoms of PTSD
- Clients will experience a reduction in non-PTSD symptoms such as anxiety, depression, dissociation, somatization, suicidality, and/or sexual dysfunction as appropriate for each client.
- Clients will develop increased body awareness.
- Clients will examine and understand patterns of victimization.
- Clients will examine and understand their own traumatic re-enactment.
- Clients will learn to sense, identify and express emotion.
- Clients will decrease their sense of shame and guilt.
- Clients will increase their sense of hope.
- Clients will decrease their sense of isolation.
- Clients will increase their self-esteem.
- Clients will learn about healthy relationships.
- Clients will develop an sense of healthy boundaries
- Clients will enhance their spiritual connection with a "higher power" as defined by them.

Most importantly, I was interested in demonstrating that participating in the program led to positive changes in terms of symptom reduction, as well as growth-enhancing beliefs and

attitudes related your traumatic experience. This is what it means to be considered an "effective" program..

The other major question addressed by the study was the impact of delivering the program in the context of a "therapeutic community". Given that the program is based upon the belief that social wounds require social healing, I was interested in determining whether a relationship exists between positive experiences of the community and positive outcomes.

If you requested a summary of results, this will be mailed to you when ready. Again, thank-you very much for your participation.

Kris Isotupa

Dear:

I imagine that you were beginning to think that I had forgotten my promise to send you the results of the outcome study. Well, things took a lot longer than I had originally anticipated but the results are finally in. Thank you again for your investment in my work. The information we obtained from this outcome study has already been used to improve the PTSR. It has also been presented at two conferences. The title of my dissertation is *PTSD as a Social Wound: Do Social Wounds Require Social Healing*? Soon it will become part of the University of Waterloo library collection. I doubt you would want to read the whole tome but here are the highlights.

Prior to conducting the outcome study, I met with clinicians at Homewood to develop and describe the underlying theory that the PTSR is built upon. This process involved articulating the ultimate goal of the program as well as the many intermediate goals. It was agreed that the ultimate goal of the PTSR was "to enhance the desire to continue healing". You may recall from your time in the program that your stay there was intended to be just a piece in your healing journey. It was the hope that you would gain something that you needed to keep you going. The anticipated gains were as follows:

◊ Clients will develop increased **body awareness** and improved **body esteem**.

◊ Clients will develop more adaptive ways of **coping** with stress thereby decreasing their use of maladaptive coping strategies.

◊ Clients will demonstrate an increased ability to engage in **self-care** activities.

◊ Clients will learn the skills necessary to maintain physical, emotional and relational **safety**.

◊ Clients will experience a reduction in the **symptoms of PTSD.**

◊ Clients will experience a reduction in **other symptoms** such as anxiety, depression, dissociation, self-harm, somatization, suicidality, and/or sexual dysfunction.

◊ Clients will learn to sense, identify and **express emotion** more appropriately.

◊ Clients will decrease their sense of isolation, learn about healthy relationships, and develop a sense of healthy boundaries (physical and emotional), i.e. clients will foster positive **beliefs about others.**

◊ Clients will increase their self-esteem and decrease their sense of shame and guilt, i.e. clients will foster positive **beliefs about themselves**.

◊ Clients will increase their sense of **hope**.

◊ Clients will enhance their sense of **meaning** in life and/or develop their **spiritual connection** with a "higher power" as defined by them .

The **encouraging news** was every one of these goals was met at least in some capacity. This means that between admission and discharge, clients reported improvements on at least one measure all of these outcomes. The most consistent improvements were noted in the 3 to 5 goals that clients made for themselves during assessment week. This highlights the importance of setting clear goals.

As you may recall, questionnaires were also sent out 4 months after discharge from the program. About half of the participants returned these mailings. From this it was determined that the majority of the gains made during the program were maintained. The unfortunate exception was with respect to hope. Clients had lost most of the hope that they had gathered from participation in the program. This is unfortunate but perhaps not unexpected. I imagine that returning home after the six weeks was a difficult adjustment. Despite this, the results are generally quite encouraging. Four months after treatment, **clients were more aware of their body and their physical needs, were using healthier coping strategies, were practicing self-care and maintaining safety, had fewer PTSD symptoms, were less distressed, were better able to express their emotions, reported improved relationships, and stated they felt better about themselves.**

I was also interested in the impact of the therapeutic community on its participants. I interviewed 87 people at discharge who reported a range of experiences in the community. I had expected that persons who reported generally positive experiences would experience greater improvements than those who had reported negative experiences in the community. However, the results of both the questionnaires and the interview did not support this hypothesis. Therefore it can be concluded that the **therapeutic community was indeed therapeutic for participants**, even those who may have had some negative experiences. This is quite encouraging and supports the continued use of this type of treatment for survivors of trauma.

Again, thank you for helping me. It was a priviledge to have shared part of your journey. If you ever get a chance to look up my dissertation, you will see that the participants in my study are the first on my long list of acknowledgments.

Sincerely,

Kris Isotupa

Appendix W

Table 13.

Independent Samples T-tests Comparing Activity Log Completers and Non-completers

Variable	Log Completers N	Mean	SD	Non-completers N	Mean	SD	t	p
Investment	61	6.13	2.31	27	5.70	2.82	.69	.46
Body Awareness	73	38.4	5.42	23	39.78	4.66	-1.11	.27
Body Shame	73	20.03	4.86	23	19.77	4.41	.25	.81
Somatic Complaints	73	62.72	14.54	23	65.02	13.94	-.69	.50
Active Coping	73	10.37	1.81	23	10.36	1.71	.00	1.00
Emotion-Foc. Coping	73	9.24	2.90	23	9.58	2.65	-.52	.66
Disengagment Coping	72	8.18	2.12	23	7.76	1.46	1.06	.39
Self -care Goals	56	6.44	2.57	16	7.15	2.19	-1.08	.65
Safety - self	72	30.43	7.96	22	31.41	9.25	-.45	.66
Safety (COPM)	66	7.12	1.98	25	7.28	1.90	-.35	.45
Intrusive: Frequency	72	7.56	3.95	22	6.86	3.35	.83	.85
Intrusive: Severity	72	9.83	5.69	23	10.39	5.40	-.43	.67
Avoidant: Frequency	72	9.97	4.69	22	11.09	5.87	-.82	.42
Avoidant: Severity	72	11.25	6.38	23	13,26	7.65	-1.14	.26
Hyperarousal: Frequency	71	7.98	3.36	22	7.77	3.38	.26	.79
Hyperarousal: Severity	71	8.44	4.70	22	8.41	5.61	.03	.98
Gen.Traumatic Distress	72	53.08	8.31	24	63.81	7.97	-.38	.71
Self-Regulation	72	55.75	11.36	24	58.49	12.40	-.96	.34

Appendix X

Table 14a.

Multiple Regression of Involvement in Program Activities on Outcome: Body Awareness

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.455	1, 73	.0001
Step 2: Core activities	.022	4, 70	.574
Step 3: Non-core Activities	.011	8, 66	.852

Coefficients (last step)	Beta	t	Significance
Pre-test	.644	7.79	.0001
Core: body awareness	.134	1.34	.182
Core: didactic/skills	.079	.744	.460
Core: process	.210	1.368	.176
Core: community building	.023	.200	.842
Non-core: expressive arts	-.042	-.369	.713
Non-core: leisure	.033	.275	.785
Non-core: spiritual	-.143	-.812	.420
Non-core: non-group	.069	.697	.489

Table 14b.

Multiple Regression of Involvement in Program Activities on Outcome: Body Shame

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.239	1, 73	.0001
Step 2: Core activities	.108	4, 70	.030
Step 3: Non-core Activities	.022	8 ,66	.682

Coefficients (last step)	Beta	t	Significance
Pre-test	.477	4.719	.0001
Core: body awareness	-.192	-1.763	.083
Core: didactic/skills	-.081	-.688	.494
Core: process	.337	2.039	.046
Core: community building	.121	.956	.343
Non-core: expressive arts	.085	.688	.494
Non-core: leisure	.096	.732	.467
Non-core: spiritual	-.149	-.795	.430
Non-core: non-group	.048	-.433	.666

Table 14c.

Multiple Regression of Involvement in Program Activities on Outcome: Somatic Complaints

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.442	1, 68	.0001
Step 2: Core activities	.043	4, 65	.156
Step 3: Non-core Activities	.011	8, 61	.678

Coefficients (last step)	Beta	t	Significance
Pre-test	.644	7.79	.0001
Core: body awareness	-.081	-.826	.412
Core: process	.188	2.006	.049
Core: community building	.009	..092.	.927
Non-core: expressive arts	.087	.946	.348
Non-core: leisure	.091	.943	.349
Non-core: spiritual	.042	-.420	.675
Non-core: non-group	-.078	-.788	.434

Table 14d.

Multiple Regression of Involvement in Program Activities on Outcome: Active Coping

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.397	1, 72	.0001
Step 2: Core activities	.030	4,69	.302
Step 3: Non-core Activities	.009	6, 67	.567

Coefficients (last step)	Beta	t	Significance
Pre-test	.649	6.889	.0001
Core: body awareness	-.092	-.828	.410
Core: process	.210	1.368	.176
Core: community building	.112	1.169	.246
Non-core: leisure	.019	-.208	.836
Non-core: spiritual	-.092	-.780	.438

Table 14e.

Multiple Regression of Involvement in Program Activities on Outcome: Emotion-Focused Coping

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.620	1, 73	.0001
Step 2: Core activities	.014	4, 70	.438
Step 3: Non-core Activities	.009	6, 68	.392

Coefficients (last step)	Beta	t	Significance
Pre-test	.805	10.817	.0001
Core: body awareness	-.032	-.363	.718
Core: process	.106	1.407	.164
Core: community building	-.038	-.520	.605
Non-core: leisure	-.024	-.325	.746
Non-core: spiritual	-.130	-1.376	.173

Table 14f.

Multiple Regression of Involvement in Program Activities on Outcome: Disengagement Coping

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.358	1, 72	.0001
Step 2: Core activities	.045	4, 69	.167
Step 3: Non-core Activities	.039	6, 67	.106

Coefficients (last step)	Beta	t	Significance
Pre-test	.565	5.782	.0001
Core: body awareness	.262	2.318	.023
Core: process	.025	.262	.795
Core: community building	-.109	1.174	.244
Non-core: leisure	-.151	-1.575	.119
Non-core: spiritual	-.206	-1.74	.086

Table 14g.

Multiple Regression of Involvement in Program Activities on Outcome: Self-care Goals

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.171	1, 56	.199
Step 2: Core activities	.150	5, 52	.053
Step 3: Non-core Activities	.045	9, 48	.596

Coefficients (last step)	Beta	t	Significance
Pre-test	.085	.629	.536
Core: body awareness	-.284	-1.97	.054
Core: didactic/skills	.017	-.114	.909
Core: process	.193	-1.348	.184
Core: community building	.212	1.575	.121
Non-core: expressive arts	.053	.383	.703
Non-core: leisure	.204	1.198	.236
Non-core: spiritual	-.093	-.624	.536
Non-core: non-group	.159	1.181	.244

Table 14h.

Multiple Regression of Involvement in Program Activities on Outcome: Safety (COPM)

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.056	1, 64	.054
Step 2: Core activities	.113	5, 60	.098
Step 3: Non-core Activities	.044	8, 57	.363

Coefficients (last step)	Beta	t	Significance
Pre-test	.265	2.126	.037
Core: body awareness	-.127	-.985	.328
Core: didactic/skills	.150	1.197	.236
Core: process	.214	1.731	.088
Core: community building	-.268	-2.171	.034
Non-core: expressive arts	.103	.812	.420
Non-core: leisure	.091	.715	.477
Non-core: non-group	.135	.1.050	.298

Table 14i.

Multiple Regression of Involvement in Program Activities on Outcome: Safety (self belief)

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.427	1,72	.0001
Step 2: Core activities	.069	5, 68	.051
Step 3: Non-core Activities	.044	8, 65	.096

Coefficients (last step)	Beta	t	Significance
Pre-test	.622	7.04	.0001
Core: body awareness	-.011	.114	.909
Core: didactic/skills	.164	-1.82	.073
Core: process	.210	-2.35	.021
Core: community building	.037	.417	.678
Non-core: expressive arts	-.093	-1.03	.303
Non-core: leisure	.201	-2.22	.029
Non-core: non-group	.103	.1.11	.269

Table 14j.

Multiple Regression of Involvement in Program Activities on Outcome: Frequency of Intrusive Symptoms

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.430	1, 72	.0001
Step 2: Core activities	.011	4, 69	.302
Step 3: Non-core Activities	.017	6, 67	.488

Coefficients (last step)	Beta	t	Significance
Pre-test	.422	3.78	.0003
Core: body awareness	.056	.485	.629
Core: didactic/skills	.052	.464	.644
Core: process	-.052	-.473	.637
Non-core: expressive arts	-.042	-.369	.713
Non-core: non-group	.128	1.166	.247

Table 14k.

Multiple Regression of Involvement in Program Activities on Outcome: Severity of Intrusive Symptoms

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.303	1, 72	.0001
Step 2: Core activities	.037	4, 69	.281
Step 3: Non-core Activities	.004	6, 67	.781

Coefficients (last step)	Beta	t	Significance
Pre-test	.547	5.46	.0001
Core: body awareness	-.010	-.102	.918
Core: didactic/skills	.084	.824	.413
Core: process	-.189	-1.87	.055
Non-core: expressive arts	-.022	-.192	.848
Non-core: non-group	.069	.695	.489

Table 141.

Multiple Regression of Involvement in Program Activities on Outcome: Severity of Avoidant Symptoms

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.373	1, 72	.001
Step 2: Core activities	.079	4, 69	.081
Step 3: Non-core Activities	.064	6, 67	.051

Coefficients (last step)	Beta	t	Significance
Pre-test	.359	3.13	.0015
Core: body awareness	-.007	.052	.959
Core: didactic/skills	.003	-.025	.980
Core: process	-.266	-2.52	.014
Non-core: expressive arts	-.288	-2.35	.022
Non-core: non-group	.097	.903	.370

Table 14m.

Multiple Regression of Involvement in Program Activities on Outcome: Severity of Avoidant Symptoms

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.159	1, 72	.0004
Step 2: Core activities	.091	4, 69	.045
Step 3: Non-core Activities	.037	6, 67	.181

Coefficients (last step)	Beta	t	Significance
Pre-test	.421	3.97	.0002
Core: body awareness	.028	.218	.828
Core: didactic/skills	-.061	-.496	.621
Core: process	-.313	-2.96	.003
Non-core: expressive arts	-.105	-.868	.388
Non-core: non-group	.089	1.741	.086

Table 14n.

Multiple Regression of Involvement in Program Activities on Outcome: Frequency of Hyperarousal Symptoms

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.342	1, 71	.0001
Step 2: Core activities	.055	5, 67	.206

Coefficients (last step)	Beta	t	Significance
Pre-test	.579	5.84	.0001
Core: body awareness	.044	.443	.659
Core: didactic/skills	.040	-.402	.689
Core: process	-.218	-2.26	.026
Core: community building	.011	.109	.914

Table 14o.

Multiple Regression of Involvement in Program Activities on Outcome: Severity of Hyperarousal Symptoms

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.406	1, 71	.0001
Step 2: Core activities	.030	5, 67	.465

Coefficients (last step)	Beta	t	Significance
Pre-test	.629	6.69	.0001
Core: body awareness	.066	.688	.493
Core: didactic/skills	.075	.781	.437
Core: process	-.125	-1.33	.188
Core: community building	.074	.760	.449

Table 14p.

Multiple Regression of Involvement in Program Activities on Outcome: Generalized Traumatic Distress

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.210	1, 66	.0001
Step 2: Core activities	.056	5, 62	.331
Step 3: Non-core Activities	.037	7, 60	.204

Coefficients (last step)	Beta	t	Significance
Pre-test	.462	4.122	0001
Core: body awareness	.045	.383	.702
Core: didactic/skills	.153	1.27	.209
Core: process	-.216	-1.86	.068
Core: community building	.013	.119	.906
Non-core: expressive arts	-.189	-1.69	.096
Non-core: non-group	.040	-.340	.735

Table 14q.

Multiple Regression of Involvement in Program Activities on Outcome: Self Regulation

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.230	1, 66	.0001
Step 2: Core activities	.037	5, 62	.543
Step 3: Non-core Activities	.015	7, 60	.547

Coefficients (last step)	Beta	t	Significance
Pre-test	.451	3.84	.0003
Core: body awareness	.164	1.35	.181
Core: didactic/skills	.121	.990	.326
Core: process	.080	-.670	.505
Core: community building	.012	.103	.918
Non-core: expressive arts	-.120	-1.06	.292
Non-core: non-group	-.017	-.145	.885

Table 14r.

Multiple Regression of Involvement in Program Activities on Outcome: Alexithymia

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.167	1, 71	.0003
Step 2: Core activities	.043	4, 68	.299
Step 3: Non-core Activities	.024	8, 64	.733

Coefficients (last step)	Beta	t	Significance
Pre-test	.442	3.84	.0003
Core: body awareness	.032	.212	.832
Core: didactic/skills	-.118	-.830	.410
Core: process	-.147	-1.25	.214
Non-core: expressive arts	-.159	-1.34	.184
Non-core: leisure	-.032	-.282	.779
Non-core: spiritual	-.049	-.314	.754
Non-core: non-group	.037	.294	.769

Table 14s.

Multiple Regression of Involvement in Program Activities on Outcome: Feelings Goals

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.088	1, 42	.049
Step 2: Core activities	.096	4, 39	.222
Step 3: Non-core Activities	.111	8, 35	.259

Coefficients (last step)	Beta	t	Significance
Pre-test	.339	2.30	.027
Core: body awareness	-.105	-.534	.596
Core: didactic/skills	-.450	-2.42	.021
Core: process	.237	1.55	.120
Non-core: expressive arts	.111	.723	.474
Non-core: leisure	.055	.367	.715
Non-core: spiritual	.318	1.56	.123
Non-core: non-group	.245	1.50	.142

Table 14t.

Multiple Regression of Involvement in Program Activities on Outcome: Other Beliefs

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.386	1, 72	.0001
Step 2: Core activities	.057	5, 68	.147
Step 3: Non-core Activities	.005	8, 65	.889

Coefficients (last step)	Beta	t	Significance
Pre-test	.612	6.01	.0001
Core: body awareness	.173	1.55	.124
Core: didactic/skills	.060	.609	.544
Core: process	.162	1.52	.133
Core: community building	.043	.403	.688
Non-core: leisure	.024	.248	.804
Non-core: spiritual	.076	.695	.490
Non-core: non-group	.038	.374	.709

Table 14u.

Multiple Regression of Involvement in Program Activities on Outcome: Relationship Goals

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.159	1, 48	.004
Step 2: Core activities	.148	5, 44	.067
Step 3: Non-core Activities	.040	8, 41	.484

Coefficients (last step)	Beta	t	Significance
Pre-test	.288	2.17	.035
Core: body awareness	.421	2.89	.006
Core: didactic/skills	.106	.779	.440
Core: process	-.097	-.687	.495
Core: community building	.146	1.07	.287
Non-core: leisure	.091	.654	.517
Non-core: spiritual	.147	.983	.331
Non-core: non-group	.070	.495	.623

Table 14v.

Multiple Regression of Involvement in Program Activities on Outcome: Self Beliefs

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.327	1, 72	.0001
Step 2: Core activities	.092	5, 68	.037
Step 3: Non-core Activities	.037	9, 64	.359

Coefficients (last step)	Beta	t	Significance
Pre-test	.594	6.04	.0001
Core: body awareness	-.237	-2.18	.032
Core: didactic/skills	.162	1.45	.150
Core: process	-.186	-1.80	.066
Core: community building	-.098	-.971	.335
Non-core: expressive arts	-.090	-.902	.370
Non-core: leisure	.198	1.87	.065
Non-core: spiritual	-.043	-.371	.712
Non-core: non-group	.010	.107	.914

Table 14w.

Multiple Regression of Involvement in Program Activities on Outcome: Hope

Model Summary	R square change	df	Sig F Change
Step 1: Pre-test	.325	1, 71	.0001
Step 2: Core activities	.109	5, 67	.017
Step 3: Non-core Activities	.018	9, 63	.706

Coefficients (last step)	Beta	t	Significance
Pre-test	.572	5.83	.0001
Core: body awareness	.199	1.52	.132
Core: didactic/skills	-.089	-.855	.396
Core: process	-.254	-2.16	.010
Core: community building	.042	.411	.682
Non-core: expressive arts	.031	.277	.820
Non-core: leisure	-.037	-.364	.716
Non-core: spiritual	.016	.145	.885
Non-core: non-group	-.136	-1.34	.182

Table 14x.

Multiple Regression of Involvement in Program Activities on Outcome: Growth

Model Summary	R square change	df	Sig F Change
Step 1: Core activities	.019	3, 69	.720
Step 2: Non-core Activities	.001	4, 68	.760

Coefficients (last step)	Beta	t	Significance
Core: body awareness	-.023	-.185	.853
Core: didactic/skills	.060	.458	.648
Core: process	.131	1.051	.297
Non-core: spiritual	.039	.306	.760