THE EMOTIONAL CONTENT OF DREAMS

by

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Abstract

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The analysis of dreams is often crucial in clinical work with trauma survivors and other populations who have experienced life-altering events. Dreamwork can be beneficial for survivors when done in a way that allows safe access to trauma and emotional content. This exploratory study is the first to use two major dream content scales on a dataset of trauma and general dreams.

The study hypothesized that: 1) dreams of trauma survivors contain more emotions than dreams of non-trauma survivors, 2) dreams of trauma survivors contain more intense emotions than dreams of non-trauma survivors, 3) dreams of survivors of human designed traumas contain more emotions than survivors of traumas not of human design and 4) dreams of survivors of human designed traumas contain more intense emotions than survivors of traumas not of human design. It also tested a fifth hypothesis that the two scales used for the study, the Hartmann and Hall/Van de Castle scales, would obtain similar results.

The first two hypotheses were confirmed by study results. Not only was association found between trauma and emotion/emotion intensity, but also with powerful negative emotions and negative emotions (helplessness, fear, disgust, anger and guilt). Negative dream interactions (danger and attack) were significantly associated to being a trauma survivor as well. In addition, positive emotions (power and awe) and a positive interaction (sexuality) had significant association to trauma.

There were significant differences in emotions when comparing by trauma type but no significant differences in emotion intensity, confirming the third hypothesis but not the fourth. There were significant associations to dream elements for both survivors of human designed trauma (success and awe) and trauma not of human design (helplessness and disgust).

The study findings replicated Hartmann's, the researcher who has done the most work in this area, confirming his results. However, the two scales used for the study did not obtain similar results, disconfirming hypothesis five.

The study outcomes engender both research and practice implications. As awareness of trauma grows, practice guidelines are essential to clinicians. Nightmares and other highly charged dreams are signals that intervention is required. This study provides a direction for these clinical interventions that can be utilized in different practice settings, augmenting both their efficacy and the recovery process.

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Chapter 1 – Contextual Frame

Overview

Although the emotional content of dreams has been explored from various vantage points utilizing several methodologies, it is an area that remains understudied. The intent of this dissertation is to describe a study which was done with the aim of contributing to the knowledge base on dreams and emotions, and enabling practitioners to: 1) learn more about trauma survivors via the emotional content of their dreams and 2) understand more about the role of dreams in mental health. This exploratory study has the potential to pave the way for more in-depth research by highlighting new areas to investigate related to dreams and emotion. It will also increase knowledge related to the Hartmann and Hall/Van de Castle instruments (Hartmann, Zborowski, & Kunzendorf, 2001; Van de Castle, 1995) utilized for cataloging the content of dreams.

The author analyzed the emotional content of dreams in order to learn more about how emotions are expressed and processed in dreams. Of studies done on the emotional content of dreams, few have been done with trauma survivors despite the incidence of nightmares in this population. Hartmann (1996, 1998, 2001, 2003) has been the most active in this area. According to studies he has done, dreams of trauma survivors have more emotional intensity than dreams in general (Hartmann, 1998). The intent of this study was to further explore Hartmann's theory regarding the intensity of trauma survivors' dreams in an effort to learn more about emotions in dreams.

Toward this end, the emotional content of trauma survivors' dreams was analyzed and the results compared to the emotional content of general dreams. Trauma survivors' dreams were examined further. They were separated into two groups, designated by

trauma source, and their emotional content was compared. The dreams were studied in an attempt to ascertain what, if any, differences existed between the emotions contained in the dreams of trauma survivors and general dreams. Differences in the emotional content of dreams in the two trauma groups were delineated.

Two scales dominate in studies examining dream emotions. Hartmann's scale, with which he discovered the increased intensity of trauma survivors' dreams, has not been as widely used, nor does it have the proven track record of another well-known scale, Hall/Van de Castle's (Domhoff, 2003). This study, therefore, used both the Hall/Van de Castle and the Hartmann scales for coding content of dreams so that if the hypotheses of the study were confirmed, Hartmann's theory that the dreams of trauma survivors contain more intense emotions than general dreams would be supported and his scale would gain credence.

The study utilized 100 general dreams and 100 dreams of trauma survivors. Fifty of the dreams of trauma survivors were from individuals affected by trauma not of human design, such as life-threatening illness and natural disaster, and 50 were from individuals affected by human designed trauma such as child abuse, domestic violence, rape, and war. The dreams were quantitatively coded utilizing the Hall/Van de Castle and Hartmann scales, and the results were statistically analyzed and compared. It was expected that the two scales would obtain similar results. To establish reliability in the use of the scales, 2 coders each scored the data independently, utilizing both the Hartmann and Hall/Van de Castle scales, and an excellent level of agreement was achieved. The final level of agreement for the study was 90.6%.

Although the study was primarily quantitative, the dreams were also qualitatively analyzed without any overarching frameworks. Qualitative dream content data was used to demonstrate the rationale behind the quantitative coding of dreams and to attempt to ascertain the reason for any differences in the study results obtained with the two quantitative instruments. Themes in the qualitative data were highlighted.

The study focused only on the dreams of women because there are reported gender differences in dream content. Women's dreams, for instance, contain more emotion than men's (Van de Castle, 1995). Women also process trauma differently than men, with Post Traumatic Stress Disorder (PTSD) more prevalent in women (Herman, 1992). Thus, results found should be clearer since the initial focus was on one gender.

This dissertation is divided into six chapters: 1) contextual frame 2) statement of research issue, 3) literature review, 4) research design and methodology, 5) research findings and 6) implications of findings and conclusion. Chapter 1 contextually situates the research topic. Chapter 2 delves into the literature and elaborates on the research topic by providing theoretical context and discussing the major theoretical concepts related to studying the emotional content of dreams. Chapter 3 utilizes the literature and prevailing theories to establish a rationale for the research topic. Chapter 4 provides a methodological framework for the proposed research and chapter 5 reports the findings. When warranted, sections of the dissertation are broken down into sub-sections to enhance readability and organizational structure. The dissertation concludes in chapter 6 with a presentation of a summary of the study findings and a discussion of the implications of exploring the emotional content of dreams. Directions for future research in this area are also recommended.

This first chapter of the dissertation is comprised of the following sections: 1) background information; 2) incidence of trauma; 3) obstacles to recovery from trauma; 4) theoretical trauma framework; 5) trauma and cognition; 6) the role of emotion in trauma; 7) the relationship between trauma, emotion and dreams and 8) rationale for focusing on women. The purpose of the chapter is to place the research topic in a contextual perspective within both social work practice and research. The discussion will begin with background information that includes an overview of the problem formulation. To provide context, the theoretical basis of the project will then be explained starting with background material on trauma. The extent of the problem and its major theories will be included in the discussion. The connection between trauma and cognition will then be discussed, highlighting the neurological effects of trauma that often lead to difficulties with emotion regulation. The dissertation will continue to set context with an exploration of the heart of the project, how trauma and emotion are linked. This will lead to a discussion of dreams, trauma, and emotion. A rationale will also be given for focusing on women in this study.

Background Information

The author's clinical work with cancer patients initiated the exploratory process that led to this project. Emotions were salient in their dreams and patients seemed willing and enthusiastic about discussing and working on the emotions in the dreams, even though they avoided discussing similar emotions in traditional psychotherapy. This was a striking phenomenon, contrasted to the way cancer patients tend to focus more on disease symptoms and treatments than on emotional expression. Since it has been found that

focusing on feelings can be beneficial for cancer patients, it seemed appropriate to capitalize on the "safe" access to emotion provided in dreams (Goelitz, 2001a, 2001b).

It was hypothesized in this study that 1) dreams of trauma survivors contain more emotions and 2) dreams of trauma survivors contain more intense emotions than dreams of non-trauma survivors. The clinical work of the author supports this premise, as does the work of Hartmann and others who studied the emotions contextualized in dream images (Goelitz, 2001a, 2001b; Hartmann & Basile, 2003). Hartmann's research involved an instrument he designed to code dream images (Hartmann & Basile, 2003). However, there are no published studies of the emotional content of trauma survivors' dreams where the emotions are only studied when specifically recorded by dreamers in their reports of dreams. This is a surprising gap in the literature since the incidence of trauma nightmares is so high that they are included as a criterion for PTSD in the Diagnostic and Statistical Manual of Mental Disorders (DSM) IV (American Psychiatric Association, 2000). The dearth of literature on the topic and the fact that the hypotheses can be empirically tested make this an area ripe for study.

It further hypothesized that 3) dreams of survivors of human designed traumas contain more emotions and 4) dreams of survivors of human designed traumas contain more intense emotions than survivors of traumas not of human design. This is also an understudied area and a gap in knowledge about trauma survivors. There are no published studies of this sort in the literature. It is an area that requires attention and study because experts have found that experiencing trauma of human design can be even more difficult to reconcile and heal from than experiencing trauma not of human design, such as the possibility of death from illness (Berzoff & Silverman, 2004; Howard & Goelitz, 2004).

PTSD symptoms, for example, may be particularly acute and enduring when the trauma experienced is of human design (American Psychiatric Association, 2000).

Finally, it was a hypothesis of this study that the two most prevalent scales utilized to code dream emotions, the Hartmann scale and the Hall/Van de Castle scale, would obtain similar results. Since one scale, Hartmann's, codes emotions by having the coder extrapolate them from dream images and the other, Hall/ Van de Castle's, only codes emotions when explicitly mentioned by dreamers in their written dream reports, confirming this hypothesis would support Hartmann's premise that dream images contain dreamers' emotions. It would also corroborate his past research on dreams and emotion and add credence to his theory that trauma survivors' dreams contain more intense emotions than those of the general population.

This is an important exploratory study because dreamwork may be beneficial for trauma survivors if it can be done in a way that allows safe access to trauma emotions. Confirming the study hypotheses could therefore support utilizing dreams as a practical intervention for this population. If the hypotheses were not confirmed, dreamwork could still be helpful for trauma survivors but no more so than for non-trauma survivors. This would also be an indication that dreams do not reflect waking life since, although trauma survivors can experience alexithymia (Krystal, 1979), emotion is generally more prevalent for them than for those who have not experienced trauma (Herman, 1992).

This study would also add to the knowledge on dreams and emotions because it would test the theory Hartmann formed regarding the intensity of trauma survivors' dream emotions by studying it in a discrete context and determining whether the same results would transpire. By coding emotion expressed in dream images, Hartmann has

found that trauma survivors have more emotion and more intense emotion than non-trauma survivors in their dreams. Confirming the hypotheses of this study would provide further evidence in support of his theory. Supplementary background information will now be outlined in preparation for a detailed account of the problem formulation and subsequent research design and methodology.

Incidence of Trauma

Trauma, which is defined by the *Social work dictionary* (Barker, 1999) as "an injury to the body or psyche by some type of shock, violence, or unanticipated situation," (p. 492) can be experienced first-hand or witnessed. It comes in many forms including war, torture, child abuse and other domestic violence, life-threatening illness, serious accidents, and violent crimes. Despite this, PTSD, the most common psychological signifier of trauma, was recognized as a psychiatric diagnosis only recently and was added to the DSM in 1980. Nonetheless Shakespeare, Dickens and other authors throughout history documented the effects of trauma. These trauma effects, from incidents such as war, fire and railway/industrial accidents, were known by terms like hysteria, railway spine disorder, and compensation neurosis (Graziano, 1997). War veterans' symptoms became known as shell shock in World War I and combat fatigue in World War II. Research was done on the experiences of Viet Nam veterans and in 1989, Congress established The National Center for PTSD to assist veterans with aftereffects of the war experience. In addition to war, other life events were also considered potentially traumatic: torture, rape, natural disasters, and other mechanical disasters such as airplane, car, or industrial accidents. Over time, domestic violence, child abuse, and terminal

illness were also added to the list. By 1996 it was estimated that in America, 5% of men and 10% of women could be diagnosed with PTSD (Bulkeley, 2003).

PTSD has a lifetime incidence of 10% for women and 5% for men among those who experience trauma (Najavits, 2002). The incidence of trauma is even higher as 61% of men and 51% of women experience trauma at some point in their lives (Najavits, 2002). Many do not suffer from psychological ailments, or at least do not come forward for help. According to experts in trauma work, for example, only about 25% of trauma survivors experience PTSD, depression, or generalized anxiety (van der Kolk, Weisaeth, & McFarlane, 1996). These numbers may be low because not all trauma survivors seek treatment for their symptoms. This can be especially true among the terminally ill where physical symptoms tend to take precedence over emotional or psychological symptoms. It has also been conjectured that the distress caused by cancer and other life-threatening illness may present differently than the distress from other traumas, potentially impeding detection and treatment (Mundy & Baum, 2004).

The prevalence of life-threatening illness is even more prominent today than it has been in the past. This is true because as the population ages and medicine extends lives even in the face of possible imminent death, the incidence of individuals living with incurable disease increases. According to a report by the Centers for Disease Control, for instance, the life expectancy of Americans reached a high of 77.2 years in 2001, at the same time as deaths achieved an all time low (U.S. Department of Health and Human Services, 2003). One example of the impact of life-threatening illness is that the risk of dying from cancer has decreased so that only about half the individuals diagnosed with cancer will die from the disease. Despite finding that one third of these cancer patients

are at risk psychosocially, it has been concluded that 15-25% seek help (Cwikel & Behar, 1999). Therefore, determining appropriate psychosocial treatment options for this growing population of trauma survivors has become a significant endeavor.

Obstacles to Recovery from Trauma

Healing from trauma and avoiding related emotional disturbances requires integration of trauma material so that psychic balance is restored. Although many integrate the experience and recover on their own with no intervention necessary, the intense emotions experienced as a result of the trauma can make integration difficult. It is not unusual for survivors to fluctuate between feeling numb as they deny and repress their emotions, and re-experiencing the trauma via flashbacks. Instinctual responses related to the fight or flight response can also become habitual and maladaptive after trauma if a sense of safety is not restored, causing stress and impeding recovery. The emotions generated by trauma can be so out of the scope of human understanding and coping that survivors tend to avoid them, dissociating from the emotions even as they flood their psyche (Herman, 1992).

Not only can the inability to tolerate trauma related feelings prevent integration and healing, but avoiding these feelings also precludes participation in most forms of trauma treatment, further obstructing recovery for many (Bromberg, 2006). Even when treatment is possible, many suffer from memory flashbacks that reenact the traumatic event and can become stuck in this process, reliving the trauma or the emotions of the trauma on a regular basis (van der Kolk et al., 1996). Psychotherapists can also inadvertently collude in this process, particularly if they are trauma survivors themselves (Pearlman & Saakvitne, 1995). The avalanche of trauma emotion activated by the

treatment process often overcomes them as well as their patients so that they join their patients in a dissociated state, avoiding or becoming flooded with feelings themselves. When this occurs, patients are cut off from both their internal psyches and their therapists, as a result of the shared dissociation (Bromberg, 2006). This can leave survivors of trauma either frantically eluding feelings or isolated within the well-known terrain of abandonment and reactivated trauma emotion. This is clearly not an environment that is conducive to psychotherapy. Creating a safe space is essential to psychotherapy with trauma survivors (Bromberg, 2006).

Dreams can provide both a safe space and a secure way to access trauma related emotions. Although dream emotions can be terrifying and at times reenact the trauma or associated emotions so poignantly that recurrent nightmares are frequent and sleep is elusive, emotions expressed in dreams are not generally as immediate as those expressed while awake. This and the process of writing down the dreams can give the dreamer some distance from the reenacted events or emotions. Dreaming of trauma events or feelings may be similar to seeing them in a movie or observing them as they are experienced by someone else. As an illustration, in the author's own clinical work, individuals diagnosed with life threatening cancers were able to talk safely and openly about the possibility of their own death when it was introduced in their dreams. Not only this, but these cancer patients, who had no interest in therapy until dreamwork was suggested, were also able to talk openly in the context of dreams about their feelings regarding dying and other illness related losses. Survivors of child abuse were also able to discuss their fears through dreams. These discussions allowed healing and reduced stress (Goelitz, 2001a, 2001b).

The process may have also contributed to their physical well being since stress has been found to have a negative impact on health (Kabat-Zinn, 1991).

Supporting the notion that experiencing trauma emotions from dreams can be beneficial, experts have noted that emotion regulation and the ability to create psychological distance from emotions so that they can be more readily tolerated, alleviates distress and provides individuals with access to their emotions. Not only this, but working with emotion has been found to be a predictor of positive outcome in psychotherapy (Greenberg & Pascual-Leone, 2006).

Even with the distance provided by dreams, for some patients the emotions and material in their trauma dreams may be too potent to work with in therapy. Trauma material in general can be difficult for both patients and therapists to discuss (Belicki & Cuddy, 1996; Goelitz, 2001b). The detailed stories and emotions underlying the trauma stories can be so overwhelming that finding a safe way to work can be difficult (King & Sheehan, 1996). Dreamwork with this kind of patient may be too activating and thus contraindicated.

Theoretical Trauma Framework

Healing from trauma requires integration of trauma material so that psychic balance is restored. Pierre Janet (Buhler & Heim, 2001), for example, studied the effects of trauma and developed the theory that the obliteration of psychic equilibrium was one of the central reasons for trauma's detrimental effects. He said that imbalance occurs when individuals are not able to assimilate memories of the traumatic event, leading to maladaptive reactions to the memories. According to Janet, integrating or successfully uniting the trauma thoughts with non-trauma thoughts into a single consciousness can

diminish the extensive psychological issues caused by trauma (Buhler & Heim, 2001). These issues can include Post Traumatic Stress, Dissociative, Anxiety, and Depressive Disorders (Hartmann, 2001).

Similarly, Depth Psychologists (Kalsched, 1996; Rothschild, 2000) theorize that what happens after trauma is that the survivor tries to move away from the trauma experience. If unsuccessful, as is often the case when reminders of the event trigger memories, a piece of the survivor's psyche moves away instead, causing fragmentation of self and dissociation from the event. Dissociation occurs when emotionally charged memories are filed away in the unconscious so that they can be avoided, removing the feelings from the factual details of the traumatic event or essentially erasing particularly salient memories. The split off parts of self live on, with emotions stored within the survivor's physical body and memories filed in an unconscious part of the mind, and can be inadvertently triggered until integrated (Kalsched, 1996; Rothschild, 2000). Some even see the splits as three selves, 1) a pre-trauma self, 2) a trauma self, and 3) a post-trauma self (van der Kolk et al., 1996). To integrate the trauma material and recover from the trauma, these disparate selves must be ultimately reclaimed and reconnected (Rothschild, 2000).

The effects of trauma can also be explained from a constructionist self-development point of view. According to this theory, individuals develop and grow as they construct personal realities in relation to their environments. These relational systems become intricately intertwined as growth continues and more of the environment is encountered, explored, and integrated. Trauma disrupts this process and forces growth to come to a standstill until assimilation of the trauma material occurs (McCann &

Pearlman, 1990). Another related trauma theory is that the unconscious personal significance of a traumatic event destroys the survivor's central organizing schemas in relation to others. Thus relationships become so painful that even the survivor's sense of self becomes suspect. This continues until their internal organization system can be restored (Ulman & Brothers, 1988).

Although different, these theories have a common thread. All emphasize the importance of integrating the trauma experience. This integration process unites dissociated parts and restores relational systems, ultimately creating a new equilibrium in a system disrupted by the traumatic event. Thus the integration process allows the survivor to reenter life, changed but no longer out of balance as a result of the experience.

Trauma and Cognition

Other trauma theories consider the neurological and cognitive effects of traumatic events and link these to symptoms experienced by survivors. It has been found, for instance, that many trauma survivors become hypervigilant to perceived threats, leading to the hypothesis that the amygdala, which is the portion of the brain responsible for monitoring threat, becomes overly responsive after trauma (Shin, Rauch, & Pitman, 2006). The prefrontal cortex is also involved in the fear response. One role of this portion of the brain is to notify the amygdala when the fear response is no longer needed. It is theorized that this portion of the brain may also be damaged by trauma so that signals are not sent to the amygdala and the fear response continues to be triggered when a threat no longer exists (Shin et al., 2006). The hippocampus is another portion of the brain that has been connected to trauma symptoms. It is responsible for processing explicit memories. When functioning appropriately, this portion of the brain works with the amygdala to

process emotional trauma memories. Survivors often report impaired memories. It is therefore conjectured that the hippocampus may be another portion of the brain affected by traumatic events (Shin et al., 2006).

The effects of trauma on the brain have been studied. One area of study has focused on the operations of the brain as trauma memories are recalled. In one study 24 trauma survivors, 11 with PTSD and 13 without PTSD, were examined and it was found that those with PTSD all experienced traumatic recall as flashbacks whereas those without PTSD experienced it as narrative memory. Unlike narrative memory, flashbacks are fragments of sensory experiences. Based on MRI analysis, the investigators determined that the flashbacks were retrieved nonverbally, in contrast to the narrative memories, possibly revealing a neural basis for at least one symptom of PTSD – flashbacks (Lanius et al., 2004). In a related study, Astur et al. (2006) found that one predictor of PTSD severity was memory problems correlated with reduced functionality of the hippocampus, possibly due to hyperarousal of the amygdala. This again links memory problems with PTSD (Astur et al., 2006).

Other studies have focused on how emotions are processed in the brain for trauma survivors. One study with trauma survivors, 10 with PTSD and 10 without, found through MRI that these parts of brains of those with PTSD were less stimulated by attempts to activate sadness, anxiety, and traumatic memories: certain areas of the limbic system and the thalamus, a part of the brain integral to emotion regulation. This portion of the brain monitors sensory input and attempts to identify it as it compares it to related memories. The investigators postulated that this finding could reflect dysfunction in these brain areas and the emotion and arousal functions they monitor. Since one of the roles of these

areas of the brain is to regulate emotion, it may also be true that dysregulation of emotion is another neural cause of at least some PTSD symptoms such as hyperarousal, flashbacks, and emotional numbness (Lanius et al., 2003). This is supported by practitioners who are calling for the redefinition of PTSD as a disorder of affect arousal and dysregulation rather than its current classification as an anxiety disorder, because of survivors' difficulties with emotional numbing and hyperarousal (American Psychiatric Association, 2000; Frewen & Lanius, 2006).

Besides the memory and emotional neurological effects of trauma, other effects on the brain have also been linked to trauma. Signs of stress and stress adaptation, for instance, have been noted in the brain. These include heightened amygdala activity, inducing a fear response, and neurochemical, neuropeptide, and hormonal changes which are induced by stress and ameliorated by adaptation (Charney, 2004; Vermetten & Bremner, 2002). It has also been theorized that the inability to heal, integrate trauma material, and regulate trauma emotions is linked to continuation of PTSD symptoms, such as nightmares, which may be related to the cortical processes in the brain. These cortical processes would normally move trauma memories to permanent memory where they would be stored as narrative rather than as the sensory fragments so often encountered in flashbacks and nightmares (Siegel, 2001b). The memory storing process is purported to occur not only throughout the day but also in dreams as we sleep (Siegel, 2001a). This underlines the importance of dreams for trauma survivors.

It should be clear up to this point that although healing from trauma requires integration of the trauma material, the effect on the brain of the trauma experience can impede this process. The following sections will show how linking research on trauma,

emotion, and dreams will add to the relatively small body of literature on this subject. This research should promote further study as it uncovers new areas ripe for investigation and adds to knowledge related to the integration of trauma emotions via dreams.

The Role of Emotion in Trauma

The effects of trauma can cause survivors to lose their awareness of emotions. Consequently many survivors lose the ability to talk about feelings and make informed decisions based on them. This may have adverse effects on impulse control and self care and can also disrupt the protective mechanism whereby emotions warn of danger (van der Kolk et al., 1996). Stressful events, such as occurrences or reminders of trauma, encourage the fight or flight reaction, which mobilizes our bodies when there is danger. While in this condition, stress hormones are released, blood pressure rises, muscles tense, and digestion is interrupted, potentially causing an upset stomach or other more serious physical symptoms. To avert the outward expression of this stress and to avoid feeling the associated painful emotions, many trauma survivors hide their feelings or deny they exist. Doing so increases the buildup of tension and encourages repeated occurrences of the fight or flight response. If this process becomes chronic, as it does for many trauma survivors, it no longer fulfills its mobilizing function, but instead begins to take a toll on the sympathetic nervous system. This can lead to suppression of the immune system, headaches, indigestion, hypertension, backaches, sleep disorders, anxiety and depression (Kabat-Zinn, 1991; Sternberg, 2000). It can also suppress reproductive hormones. This stress response is so prevalent that it has been found not only in trauma survivors but also in their children (Sternberg, 2000). Additionally, the stress response can be repeatedly triggered by emotional memories. Over time, chronic stress caused by trauma may

ultimately lead to an over or under-active stress response, whereas the fight or flight reaction occurs frequently or is suppressed. Both responses have an adverse affect on health, safety, and well being (Sternberg, 2000).

Those who have been traumatized tend to fluctuate between feeling numb, as they deny and repress their emotions, and re-experiencing the trauma through flashbacks. In order to reclaim their present experience and eliminate these dissociative symptoms, survivors need some level of understanding of their past trauma. Trauma overrides inherent adaptive functions so that individuals are left feeling helpless and terrified in a world that feels out of control and unsafe. Their physiological arousal, emotions, and memory are affected by the experience so that at times they have no memory of it but experience intense emotions or clear memory with no emotion. Because the emotions generated by trauma are so out of the scope of human understanding and coping, survivors tend to avoid them, thus cutting themselves off from current experiences as they build a protective shell. This dissociation can be both conscious, as individuals avoid memories of the event, and unconscious as they shy away from any emotional experience that may trigger unwanted memories. Recovery from trauma requires integration of the traumatic experience and reconnection with daily life. In order to heal, survivors must also learn how to manage the symptoms and tolerate the feelings associated with trauma (Herman, 1992).

Individuals at end-of-life also often experience extreme emotional states (von Franz, 1998). This can be complicated by the fact that with illness, the threat comes from inside, rather than outside as with most trauma, and treatment is controlled by medical practitioners, leading to patients feeling out of control and helpless. Utilizing coping

mechanisms to regulate these and other emotions, such as fear, anger, and sadness, can contribute to resilience as individuals learn to adapt to illness (Bowman, 2001).

It is theorized that with PTSD, the amygdala becomes overactive so that even benign events can trigger an emergency response, the body secretes excess stress hormones leading to an increased startle response, and endorphins are released causing emotional numbing, anhedonia and feelings of separateness from others. Not only this, but it is thought that trauma related memories are stored with intense emotions that do not modulate over time as is generally the case with non-trauma memories (Goleman, 1995). Affect dysregulation, for example, has been associated with the spectrum of trauma related mental illnesses, where individuals are not able to cope with or modulate intense emotion. In one study of 48 women suffering from PTSD as a result of childhood sexual abuse, it was found that attending an affect management group improved their symptoms (Wolfsdorf & Zlotnick, 2001). The participants, who were randomly assigned to either the group or to a wait-list control group, received individual treatment throughout the study. PTSD symptoms, depression and dissociation decreased significantly more for those in the affect management group than those on the wait list.

Emotions can be either biologically adaptive instinctual reactions, for example as they warn of danger, or learned reactions that are not necessarily adaptive. Trauma reactions fall into the category of being maladaptive when they warn of danger that no longer exists or lead to numbing of feelings that have become too painful to bear. It may be difficult to unlearn these reactions even with professional help and medication because of the hyperarousal and avoidance symptoms which make regulation of emotions such a feat for trauma survivors (Greenberg & Paivio, 1998). These two features of PTSD

particularly influence survivors' abilities to experience and express emotion (Litz, Orsillo, Kaloupek, & Weathers, 2000). Life without access to safe emotions can relegate trauma survivors to a life of disconnection and isolation. Recovery will not occur as long as trauma emotions are not dealt with in some way and integration of the trauma emotions must take place in order to heal from trauma.

The Relationship Between Trauma, Emotion, and Dreams

The treatment of trauma is often hampered by its emotional components. This aspect of the trauma response may also contribute to survivors avoiding treatment. Since encountering, exploring and integrating trauma material may be highly emotional, many avoid treatment out of fear. Some can recite the facts of the trauma without emotion, having successfully walled off emotion-laden images, but are then unconsciously triggered and become flooded with feelings such as fear, anger, guilt, and shame, sometimes not knowing why (McCann & Pearlman, 1990). Shame is a common emotion after trauma, so much so that it was initially included as a part of the DSM criteria for PTSD. Survivors frequently feel as though they should have been able to do something to stop the traumatic event, blaming themselves and internalizing the wrongdoing. Reconciling these feelings is not an easy process for most (Rothschild, 2000; van der Kolk et al., 1996).

Despite this avoidance of trauma emotion and the fear survivors often have of intense "flashback" dreams, there are many references in the literature related to using dreams to aid the process of emotionally healing from trauma. Practitioners focus on the therapeutic use of trauma survivors' dreams as both diagnostic and treatment tools (Barasch, 2000; Barrett, 2002; Bosnak, 1996b; Brunkow, 1996; Garfield, 1991;

Lothane, 1983; Mindell, 1998). These professionals offer methods for working with dreams that can aid with the healing process. Most recommend recording dreams as they occur. Some experts share their own personal experiences with dreams providing warning of illness and assisting with healing in their lives.

In an effort to assist with diagnosis, PTSD, anxiety, and depression have been examined through dreams by professionals, with various conclusions (Brunkow, 1996; Esposito, Benitez, Barza, & Mellman, 1999; Mellman, David, Bustamante, Torres, & Fins, 2001; Punamaki, 1997). According to the authors, dreams may identify trauma-induced maladaptive behaviors. The American Psychiatric Association supports the premise that dreams are possible diagnostic aids since it lists distressing dreams of the traumatic event as being one of the criterion for PTSD (American Psychiatric Association, 2000).

In a study analyzing the dream content of 18 combat veterans in order to identify combat related characteristics, Esposito et al. (1999) found that most of the dreams contained threatening elements although elements contained were not necessarily replications of the combat trauma. Mellman et al. (2001) examined dreams of 60 individuals soon after life threatening events. Participants were also tested for PTSD symptoms at this time and 39 of the 60 were tested again six weeks later. The authors found that dreams replicating the trauma event were positively correlated with more severe PTSD symptoms. Punamaki (1997) studied 268 Palestinian children and adolescents living in a violent area and compared them with 144 Palestinian children and adolescents living in a peaceful area. She found that those with hyperactive dream lives after a trauma were more susceptible to depression.

Another route practitioners take with dreams is to follow the trajectory of dreaming in the aftermath of trauma. As noted previously, this has led to the conclusion that the content of dreams diminishes in intensity with time (Stoddard, Chedekel, & Shakun, 1996; Wilmer, 1996). It has been found that post-trauma dreams start out directly related to the trauma, sometimes to the point of being reenactments, then become metaphoric as recovery occurs (Hartmann, 1998; Nader, 1996). Studies have also found that mood is assimilated and accommodated in dreams, generally providing an automatic housekeeping function that clears out the emotional remnants of the prior day (Griffin & Kiser, 2003; Punamaki, 1999).

Siegel (1996) and Lansky et al. (1989) conducted studies with trauma survivors and uncovered an aspect of post-trauma dreams that may contribute to this recovery process. They found that dreams make linkages between the current traumatic event and emotional wounds from the past, thus enabling healing of both. Punamaki (1998) outlined another benefit of dreamwork that supports healing. According to this author, dreaming can allow the ventilation of intense emotion. Since expression of feelings supports mental health, the ability to access them with some distance through dreams is a positive attribute of this work (Goelitz, 2001a, 2001b).

Others have found that the conflict inherent in trauma is expressed symbolically in dreams and can often be accessed there in psychoanalysis in an effort to aid healing, re-establish a personal organizational system, and restore internal equilibrium (Ulman & Brothers, 1988). Smith (1990) observed that traumatic dreams are an indicator of the existence of distress, and generally disappear when the stress is alleviated. In this role as gauges of emotional states, dreams can help promote self awareness and growth (Smith,

1990). For all these reasons, dreaming and working with dreams in therapy have the potential to aid the recovery process from trauma. As trauma survivors experience and talk about the trauma emotions via their dreams, integration of the traumatic event can occur and healing is promoted.

Rationale for Focusing on Women

Although there is no reason that the positive aspects of dreams would not benefit both women and men, this study focused on the dreams of women. As previously noted, studies have found differences between the content of women's dreams and men's dreams. Such differences include length, emotional content, and the incidence of nightmares. There is the possibility that some of these differences are due to societal norms rather than gender. Feingold (Rubinstein, 1990), for example, studied performance levels on standardized tests and found a decrease in gender differences between 1947 and 1980. Therefore, gender differences in dream content may also decrease as societal norms change. At the current time, however, published studies indicate a distinguishable difference between the content of women and men's dreams. The differences noted are significant enough to warrant separate investigation of women's dreams.

Not only do their dreams differ, but women also experience trauma differently than men and the incidence of PTSD is higher in women than men. Herman (1992) notes the influence of societal factors and states that refusing to accept societal views of women as passive and compliant can aid recovery from trauma. Other authors note that men cope with trauma differently than women. Men attempt to correct the problem rather than focus on feelings. This can contribute to women also ignoring their emotions or feeling guilty for being so ensconced in them (McCann & Pearlman, 1990).

It is also possible that men and women express and process emotion differently. In a study with 66 women and 34 men it was found that women experience affect more intensely than men. An example of this is that women report more negative affect. Despite this, they were found to be as happy as men, perhaps because they also report more positive affect (Fujita, Diener, & Sandvik, 1991). This may be because boys and girls learn about emotions in different ways. Parents tend to talk to girls more about emotions and to use more feeling words with them. Mothers also tend to display more emotions to baby daughters and to talk about emotions in more detail with daughters. Boys generally learn to be tough and autonomous, whereas girls thrive on connection with others (Goleman, 1995).

Supporting the decision to focus only on women, there are many instances where research related to emotions and trauma has focused only on women because of the differences in how experiences are processed by each gender (Ochsner, Bunge, Gross, & Gabrieli, 2002; Silvia, 2002). Reasons given by these researchers include that women's emotional reactions are more pronounced than men's and that their personal standards regarding how to process emotions differ (Ochsner et al., 2002; Silvia, 2002). In one such study of 87 women in an inpatient mental health facility, it was found that women with psychological problems, such as those caused by trauma, have special emotional needs which involve management of self harm and other impulsive behavior (Bland, Mezey, & Dolan, 1999). Men also have special needs. A study with 228 men with PTSD found that violent behavior is more prevalent in men diagnosed with PTSD who are in inpatient facilities (McFall, Fontana, Raskind, & Rosenheck, 1999). Therefore, for reasons of clarity, only women were focused on in this study. The dreams, trauma experience, and

ways of processing emotion differ enough by gender to justify studying them separately. This also eliminated the impact of gender as a potentially confounding variable on the inference of a regression coefficient.

Chapter 2 – Statement of Research Issue

This chapter consists of a detailed account of the problem formulation and also discusses the significance of the research issue. Definitions of terms utilized as the research problem is described will be provided. How this study will advance social work knowledge and contribute to its clinical practice will be explained as the significance of the study is clarified. This chapter will set the stage for the literature review and a discussion of the methodological framework for the study.

Problem Formulation

In order to understand the multiple forces acting on the emotional content of dreams for trauma survivors, this study brought together a variety of literatures. Since this means that it drew on several academic disciplines, it has been a challenge to pull together the diverse analytic approaches in order to create a coherent narrative. Dreams, emotion, physical effects of stress, trauma, and gender issues were explored in an effort to understand the context of dreams and emotion for women trauma survivors.

The **function of dreams** was explored first, uncovering theories supporting the premise of the study and theories in opposition. Some experts declared that dreams have no meaning, do not reflect waking life, and do not consolidate memory while we sleep. On the other hand, others insisted and showed evidence that dreams have a function and that it is related to regulating self and thus maintaining emotional balance. There is also evidence that dreams do reflect waking life, which supports the idea that dreams of trauma survivors are likely to contain any intense emotion generated by the traumatic

event. It makes sense that dreams could also contribute to healing trauma, if they function as self-regulators and work to restore emotional balance.

The literature on **emotion** was studied next in an attempt to understand more about the role of emotion in general, its influence on dreams, and how it is experienced for trauma survivors and women. It was found that although emotions seem so important to dreams that virtually all scales analyzing content of dreams contain a mechanism for recording emotional content, references to explicit emotional content are curiously limited in written dream reports, leading to the idea that dreams are not a good access point for emotion. In contrast, it was found that emotions reported in dreams reflect those in waking life. Further, as dreaming occurs, emotions are modulated. Theorists also showed that experiencing emotions and learning to process and integrate emotions is essential for all human beings. Since this is particularly true for trauma survivors, accessing emotions from dreams in an effort to process them could benefit healing from trauma even if the emotions available in this way are limited. Not only this, but processing emotion in this way could be especially important for women whose incidence of PTSD and difficulties coping with emotion are more prevalent.

The **physical effects of stress** was then examined in the literature since studying emotion uncovered detrimental effects on the brain as a result of the stress caused by trauma emotions. Besides the changes to the brain reported in the literature on emotion, it was found that long term stress caused by holding on to unprocessed emotion can contribute to physical deficiencies such as high blood pressure and a compromised immune system. This supports the premise that not only is accessing trauma related

emotions beneficial as it promotes emotional healing but it is also potentially a facilitator of improved physical health.

Trauma was then explored and the necessity to integrate the trauma experience was stressed, as was the importance of working with emotion. It was noted by some theorists that trauma survivors' ability to assimilate trauma memories was impaired. Other studies contradicted this, finding, for example, no detrimental effects on the brain due to trauma. The definition of PTSD in the DSM IV also offers no support for this premise that trauma impacts the brain processes since it does not focus on either lack of emotional mastery or assimilation of memories as symptoms of this disorder. Despite these contradicting theories, most experts seemed to agree that accessing and integrating emotions is essential to recovery from trauma.

Finally, **gender issues** were investigated to ascertain whether there was a basis for gender differences in the emotional expression within dreams. Although some felt that the differences noted may have been caused by societal norms, it seemed clear that women experience trauma differently than men, report the content of their dreams in diverse ways, and generally express and process emotion uniquely. This supports studying women separately from men before attempting to look at both and make comparisons.

Several research questions emerged out of the exploration of these intersecting analytical approaches: Does dream life reflect waking life so that the emotions expressed in dreams are the same or analogous to the emotion experienced while awake? If so, is there a benefit to accessing the emotions especially for trauma survivors who have such difficulty processing and assimilating emotion? And, if dreams do reflect waking life,

does it follow that survivors of trauma have more emotion and emotion of greater intensity in their dreams than the general population? Also, since survivors of human designed trauma are generally more affected by trauma than survivors of trauma not designed by humans, do they also have more emotion and emotion of greater intensity in their dreams? And, finally, the researcher best known for his work in this area, Hartmann, has theorized that the emotion in trauma survivors' dreams is more intense and abundant than in non-trauma survivor's dreams. Will this theory hold when examining emotions recorded by the dreamer rather than extrapolating emotions from dream images as he did?

Honing in on these questions led to four research hypotheses: 1) dreams of trauma survivors contain more emotions than dreams of non-trauma survivors, 2) dreams of trauma survivors contain more intense emotions than dreams of non-trauma survivors, 3) dreams of survivors of human designed traumas contain more emotions than survivors of traumas not of human design and 4) dreams of survivors of human designed traumas contain more intense emotions than survivors of traumas not of human design. Testing a fifth hypothesis that using both the Hartmann and Hall/Van de Castle scales to quantitatively code emotional content of dreams would obtain similar results, these hypotheses were examined utilizing both scales. If the scales did not obtain similar results, it was expected that the subsequent qualitative analysis of dreams would uncover reasons for the differences. It was also hoped that the qualitative analysis would identify new categories for future dream content analysis.

Clarifying terms in the hypotheses, the DSM IV (American Psychiatric Association, 2000) describes what type of events are potentially traumatizing:

> Traumatic events that are experienced directly include, but are not limited to, military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, natural or manmade disasters, severe automobile accidents, or being diagnosed with a life-threatening illness. For children, sexually traumatic events may include developmentally inappropriate sexual experiences without threatened or actual violence or injury. (p. 424)

Although the DSM IV does not limit potentially traumatizing events to this list, for purposes of this study, this limit was established in the interests of clarity.

The DSM IV also distinguishes traumatic events of human design and not of human design, using torture and rape as examples of traumas of human design (American Psychiatric Association, 2000). Based on these examples of purposeful harm by one human to another, human designed events experienced by study dreamers have been defined to include military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, or manmade disasters. Events not of human design have been defined to include natural disasters, severe automobile accidents, or being diagnosed with a life-threatening illness.

Significance of the Study

While ascertaining the significance of this study, it was essential to explore related research in this area and to understand why the research was so limited. When analyzing this, the question of why it was important to conduct this study was investigated. Although the results of the study will provide information and add to the knowledge base in this area as well as potentially providing support for Hartmann's theory about the emotional content of dreams, it was also necessary to understand how this will provide broader benefit for the social work profession.

The significance of the study is bolstered by the fact that the utility of dreamwork in providing support and healing has been noted when it is employed in psychosocial interventions with the physically and emotionally ill during crisis intervention; in the process of individual, family, and group counseling; and as a means of self-help. The experience of trauma can take a tremendous toll that requires a concerted effort to heal. It is clear from the literature that trauma is currently a significant societal problem with many ramifications. Its prevalence and impact make it an important area to investigate. Finding new ways to aid integration of trauma material and to regulate emotions is clearly also important (van der Kolk, 2006).

Previous research has focused on the emotional content of dreams. There have been studies exploring trauma and dreams and some that have compared the emotional content of trauma survivors' dreams to those of the general population. However, the author could not locate any that examined the emotional content of the dreams of survivors of human designed trauma and compared them to the dreams of those who survived the trauma of a life threatening illness. This was an area ripe for study and important because experts have found that experiencing trauma of human design can be even more difficult to reconcile and heal from than experiencing trauma not of human design, such as the possibility of death from illness (Berzoff & Silverman, 2004; Howard & Goelitz, 2004). PTSD symptoms may be particularly acute and enduring when the trauma experienced is of human design (American Psychiatric Association, 2000). Based on this, it was reasonable to suggest, that the emotional content of the dreams of the two groups could differ. Therefore, the results of the research will add to the body of

knowledge related to dreams and trauma, and will provide additional information about the link between emotions and trauma.

Although this study is similar to other research that has explored emotions in dreams using the Hall/Van de Castle system, there are no published studies utilizing this instrument that compare the emotional content of trauma survivors' dreams to non-trauma survivors' dreams. The fact that the instrument has not been used before for a similar study is influenced by these factors: 1) There is a dearth of literature and research in this area. Studies have been done utilizing the scale to compare emotions among gender, age, and cultural groups, however none have been published on trauma survivors' dreams. 2) Emotions are only one variable tested by this scale. There are also classification systems for coding characters, social interactions, activities, success and failure, misfortune and good fortune, settings of dreams, and objects in dreams. These classification systems have been used widely by dream researchers (Domhoff, 2003).

Experts in dreams and trauma, including one of the authors of the Hall/Van de Castle instrument, corroborated that the particular focus of this dissertation was an area that had not been studied previously (Bosnak, personal communication, 2006; Van de Castle, personal communication, 2006; Bulkeley, personal communication, 2006; Krippner, personal communication, 2006). The study will add to the relatively small body of literature on dreams and trauma and increase knowledge in this area. It will also increase knowledge related to the Hartmann and Hall/Van de Castle scales. No literature was located that documented studies comparing the two instruments. This was another gap in the literature. At the same time, the study will add to the knowledge on trauma emotion and its expression in dreams. In addition, the study could uncover a distinction

between the emotion levels in dreams of those affected by life threatening illness and those affected by human designed trauma, adding to knowledge about the difference between the two. Finally, it is hoped that this study will encourage future research along similar lines so that knowledge will continue to be generated.

In terms of practice, the results of the study should add to awareness of trauma survivors' tendency toward emotion dysregulation and nightmares, providing practitioners with another avenue for intervention. Emotion has the potential for harm in three ways. Emotion can be: 1) turned inward, 2) directed toward others, or 3) ignored, denied, or otherwise banned from existence by individuals recovering from trauma. Anger and aggression turned inward, for instance, have been linked to substance abuse, eating disorders, self-mutilation, low self-esteem and/or critical thinking, and suicide. Anger and aggression toward others can also manifest as criticism, angry outbursts, destructive behavior, and domestic violence (van der Kolk et al., 1996).

Increased knowledge of the incidence of emotion dysregulation in trauma patients and in their dreams could help direct the work in this area, providing for more targeted interventions. Dreamwork and trauma practitioners could utilize this knowledge to work more directly with latent and manifest emotion in their patients' therapy and dreams. Some emotions, such as anger and shame, not only cause innumerable problems for patients but also carry a stigma that can further complicate treatment. Practitioner sensitivity to the topic can help break down the stigma and allow it to be a focus of therapeutic work. This is important because trauma is so prevalent and emotions are so crucial to healing to the point that not integrating them can contribute to health problems.

It is hoped that dreamwork with trauma survivors will be particularly affected by this study as it highlights dreams as a potentially safe access point for trauma emotions and encourages more practitioners to use dreams in their work with trauma survivors. In the authors' experience, many trauma therapists avoid working with dreams because they lack knowledge and expertise related to dreamwork. It will hopefully encourage practitioners to access emotions through dreams allowing them to be worked with in therapy just as emotions in waking life are. With dream emotions, however, there will be that distance or natural dissociation that the dreams can provide. This can often make accessing the emotions safer so that they can be identified and integrated as a part of the process of emotional healing. The dissertation study demonstrates that dreams can be used as a unique opportunity to safely access trauma emotions.

The results of this study will therefore be important for these reasons: 1) If the dreams of trauma survivors contain more and more intense emotion than non, this supports the premise that dreams reflect waking life and promotes the idea that unprocessed trauma emotion can be accessed in dreams. 2) If the emotional content of dreams of survivors of traumas of human design differs from those not of human design, this also supports that dreams reflect waking life and that unprocessed emotion of trauma survivors can be accessed and worked on via dreams. In both cases, it is hoped that this research will not only encourage dreamwork with trauma survivors but that it will also promote further research, for example to learn more specifics about the emotions expressed in dreams.

Ultimately, it is hoped that the results of this study will encourage a holistic approach to trauma treatment in which survivors are treated utilizing a multifaceted

framework looking at: 1) how survivors are impacted by emotion, 2) the possible physical effects of stress from trauma due to arousal and avoidance of emotion, 3) potential behavioral effects of problems with emotion regulation, such as aggression and self harm, and 4) how traumas such as life-threatening illness and child abuse differ.

Chapter 3 – Literature Review

This chapter utilizes the literature and prevailing theories to establish a rationale for the research topic. It consists of the following sections: 1) introduction; 2) theories related to the function of dreams; 3) the regulation of emotions in dreams and waking life**;** and 4) an encapsulation of the literature and theoretical stances.

Introduction

Ideologies related to dreams encompass many countries and cultures. Dreams have historically been linked with illness and healing throughout the ages. Hippocrates and other early Greeks recognized the importance of dreams and acknowledged their link with health (Mallon, 2000). Plato, for example, saw dreams as an avenue for the expression of passionate emotion. He said that lack of logical thinking while dreaming enabled this expression, which could be manifested positively in decent human beings or as animalistic lust and ferocity in the dreams of the immoral (Van de Castle, 1995).

Aristotle, on the other hand, saw dreams as sources of information about physical health and healing. He believed that sleep allowed access to this information because the dreamer was free from the distractions of the waking world. Galen echoed these beliefs, seeing dreams as diagnostic tools that reveal physical maladies and even offer guidance for surgery (Van de Castle, 1995).

In another part of the world, a 1994 translation of *The Tibetan Book of the Dead* (Anonymous, 1994) compared dreams with death and recommended using dreams as a rehearsal for death. This book discusses the importance of preparing for death. Since sleep and dreams are, according to *The Tibetan Book of the Dead,* "little deaths," learning

from them is one way of getting ready to die. These cultural traditions, combined with subsequent research related to dreams, have prompted many theories about the purpose and function of dreams.

Viewpoints regarding the function of dreaming vary according to the methods applied to working with them. Dreamwork methodologies generally include Freudian, Gestalt, Jungian, Shamanic, and body-centered approaches. Classical Freudians see dreams as a means of discharging instinctual tensions and relate dream characters to the analyst. Conversely, the Gestalt school maintains that each character and object in the dream represents the dreamer. Jungians consider dreams a source of guidance on the road to individuation or wholeness. All three use dreams to access the subconscious mind in various ways. They are interpreted through symbolism, word association is used to tease out unconscious messages, implicit personal meanings of dream imagery are explored by amplifying them in an intensely focused investigation, and dialogues are conducted among various dream characters to learn more about what they are trying to communicate (Van de Castle, 1995).

The Shamans have another point of view; they see dreams as messages from the spirit world, which can provide power and knowledge. They believe that dreams support and heal their lives and communities (Krippner, 1990). Incorporating a number of these beliefs, the tenet of body-centered approaches is that dreaming can heal and support growth when integrated into the psyche as the dreamer re-experiences the dream while awake and learns directly from its enactment (Bosnak, 1996b; Goelitz, 2001a, 2001b; Zwig, 1990).

Practitioners suggest methodologies that can aid the healing process of dreams. Most practitioners recommend that individuals record their dreams as they occur. Some also suggest drawing the dream and working with it in that form (Mallon, 2000; Muff, 1996). Muff (1996) reports that dream images helped the AIDS patients she worked with negotiate transitions involved in life-threatening illness, including preparing to die. Guiley (1998), Mallon (2000), and others discuss using dream incubation to invite help with the recovery process. Incubation is an ancient practice that involves asking for specific dreams to answer questions, solve problems, or even heal physical illness (Van de Castle, 1995).

In addition to more direct healing, the author's “clinical work seems to indicate that the use of dreams helps create a safe environment... by encouraging clients to discuss the emotional aspects of their disease and introducing topics, like death and dying, which can be difficult to discuss." (Goelitz, 2001a, p. 375) When used as a component of support groups, dreams may have the added benefit of strengthening group cohesion (Bosnak, 1997; Provost, 1999). In a pilot project conducted by the author, cancer support group members shared openly and commonality was established quickly via their dreams. Issues of loss, such as those related to death and dying, are of concern to them in their waking lives. These issues are normally difficult to introduce but came up naturally with dreamwork, increasing connections among members and supporting what the literature reports (Goelitz, 2001b). Practitioners state that pertinent topics such as these are introduced in dreams because sleep and awake-time are linked, so that dreams reflect waking life (Van de Castle, 1994).

Adding to the aforementioned therapeutic qualities, dreams may also provide a housecleaning effect whereby the content of dreams diminishes in intensity as healing occurs (Hartmann, 1998; Nader, 1996; Stoddard et al., 1996; Wilmer, 1996). It is theorized that this housecleaning function occurs nightly, assisting individuals with the process of integrating and accommodating stressful events so that morning dreams contain less stress than those at night. This suggests the premise that nighttime dreaming promotes or, at the very least, reflects the process of healing (Griffin & Kiser, 2003; Hartmann, 1998; Punamaki, 1999; Wilmer, 1996).

Theories Related to the Function of Dreams

This section describes various theories related to the function of dreams: 1) wish-fulfillment, 2) compensatory, 3) reflection of waking life, 4) route to consciousness and increased self-awareness, 5) self-regulation through cognitive processes, and 6) modulation of emotions.

Although there are many theories related to their functionality, dreams are most recognized for their ability to promote self-awareness and resolve emotional and relational issues. Dreams bring issues to consciousness and reflect individuals' efforts to grapple with them as they sleep (Delaney, 1990). The access they provide to the unconscious mind is the reason many practitioners credit dreams with therapeutic qualities that range from diagnosis and healing of physical or emotional illness to facilitation of peaceful death (Barrett, 2002; Bosnak, 1996b; Moss, 1998; Muff, 1996; Van de Castle, 1995). As a result of this process of bringing issues to consciousness, it is believed that dreaming, particularly when dreams are remembered, encourages living

consciously with knowledge of self and in sync with the environment, while striving for ultimate potentiality (Guiley, 1998).

Wish-fulfillment

Freud was one of the first who saw this therapeutic quality of dreams as being related to consciousness and the psyche. He believed that dreams are connected to and in fact continue waking life via their relationship to the psyche. Although this connection can be quite clear at times, according to Freud, at others it is not so readily apparent. Dreams, for instance, often continue to work at issues from daily life and can even come up with solutions via creative inspiration or elucidation of conflicts. Freud said that dreams can also offer respite, so that their imaginative playfulness can provide nurturance and healing as we sleep (Freud, 1911).

Despite the quality of fantasy in dreams, Freud saw their emotions as very real and believed that they have a greater influence on the dreamer than the ideas dreams portray. He pointed out that even dreams with negligible apparent affect often become emotional as the dream is explored while awake. Freud attributed this, at least partially, to the theory of wish-fulfillment, which asserts that painful thoughts can only surface in dreams if their counterpart hopeful thoughts are also present, representing the wish-fulfillment. He believed that dreams attempt to clear the psyche of negative emotions by decreasing their intensity and presenting their inverse in dreams so that pain might be expressed as joy or despair as hope. According to his theory, the more intense the negative emotion, the more the wish-fulfillment presents itself positively in the dream. He said that this process occurs in waking life as well. Thus, the psyche constantly looks for equilibrium, balancing negative thoughts with positive so that dream life is merely a

continuation of this process. At night, however, some of the protective censorship of the psyche is withdrawn so that emotions and memories hitherto unavailable to the conscious mind can be retrieved. As previously stated, this is not always obvious in the manifest content of the dream, but can be found in the latent content if explored (Freud, 1911).

Although Freud's work related to the attempt to balance emotions through wish-fulfillment set the stage for this and many other theories related to dreams, Lowry was one of the first to explicitly state that dreams are actually affect regulators. In 1942, he proposed that dreams are biologically essential to physical and psychic well being. This is true, he said, because feelings can affect individuals physically, causing palpitations or nausea, for example. He believed that maintaining balance between negative and positive feelings requires regulation via dream images that confront the negativity and thus also promote health (Van de Castle, 1995).

Compensatory

Jung (1974) taught a related idea about the regulatory purpose of dreams. He believed that dreams have a compensatory function, whereby events outside of the awareness of the day's experience are assimilated into consciousness during the night through dreaming, regulating the psyche in the process. He saw the purpose of this self-regulatory function as maintaining psychological equilibrium as the days' events are connected with memories and consequently integrated. He also thought that Individuation, a process by which we become conscious, is assisted by this self-regulatory dreaming process, supporting the idea that dreams encourage knowledge of self and personal growth (Jung, 1974).

Hartmann's (1996) research supports Jung's idea that dreams help form connections between current and past memories. In fact, Hartmann's investigations have led him to believe that one of the functions of dreams is to connect recent events to the past. He studied 36 Vietnam veterans, comparing those who had nightmares with those who did not. He concluded that nightmares ended as individuals integrated the traumatic material by connecting it to other memories from their past. His work exploring dreams of trauma survivors over an extended period of time showed that their dreams made connections between the occurrence of the trauma and other memories, and that these connections were made via emotions. He found that dreams pictorially depicted the dominant emotions of the dreamer; often doing so even before the dreamer was aware of them. It has been observed, for example, that anxiety about illness appears in dreams before the ailment has even been diagnosed (Hartmann, 1996, 2001).

Hartmann (2001) concludes that dreams have a "quasi-therapeutic" function. He describes the dream process as similar to the therapeutic space created between therapist and patient. When a survivor tells their trauma story in therapy, a safe space is created that allows the dreamer to tell the trauma narrative. Herman (1992) states that this process of sharing the narrative in a safe way can transform fragmented trauma memories so that PTSD symptoms are diminished.

Hartmann believes that the process of dreaming can also create an analogous safe space. As in the therapy process, when the trauma narrative unfolds in dreams connections are made with past events, which helps makes sense out of the traumatic experience. This enables adaptive integration of the trauma so that it loses its impact and powerful trauma emotions dissipate. The emotions in dreams may start out as terror and

over time switch to guilt, shame, sadness, and anger before they are integrated. This happens as dreams incorporate the trauma, memories related to the trauma, and the emotions of both, allowing the dreamer to process them as they sleep (Hartmann, 2001). Hermann (1992) acknowledges the value of dreams as a doorway to trauma memories, which can aid healing when accessed safely. Sadness related to the trauma must be experienced so that the survivor can recover walled off parts of self, and their full range of emotions (Herman, 1992).

Reflection of Waking Life

Hartmann concurs with Jung that dreams are compensatory. Jung says, for example, that thoughts such as trauma memories, which are partially or completely repressed in waking life, are often expressed in dreams. Thus, dreams create an opening for repressed material, such as trauma memories, to seep out when and if the dreamer is ready to confront the repressed thoughts. Hartmann, on the other hand, also espouses another related idea, the continuity aspect of dreams introduced by Freud.

The continuity hypothesis of dreams states that dreams reflect waking life, whereas the compensation hypothesis states that dreams show what is repressed in waking life (Van de Castle, 1995). Subsequent to Freud's original hypothesis, the continuity aspect of dreams has been explored in laboratory tests. The results of these tests show that the content of dreams parallel waking life, signifying continuity between the two (Domhoff, 2003).

It is purported that dreams parallel waking life and also help with the integration of information from daily events. Not only this, but day-to-day information is stored as memories and the memories are connected to feelings, so that as the memories are

processed, so are the feelings (Wolf, 1994). In one study that supports this view, about 35 dreams were collected from patients awaiting major surgery. The dreams were collected before and after surgery. According to the investigator, it was found that the dreams studied reflected magnified versions of the patients' emotions and of their coping mechanisms related to the surgery, possibly indicating that not only are emotions related to surgery and other stressors often expressed in dreams, but ways to cope can also be introduced via dreaming as the psyche attempts to compensate (Van de Castle, 1995). Another more recent study looked at waking and dream emotions over a 3-week period and found significant associations between the two. There were 123 participants who kept a log of emotions and scored their intensity for the study utilizing an 8-point scale. An extensive training period preceded this process to acclimate participants to the log (Gilchrist, Davidson, & Shakespeare-Finch, 2007).

In accordance with these principles of compensation and continuity, Hartmann believes that the waking life emotions of trauma survivors, which are often repressed, are invariably articulated in their dreams. As the emotions are expressed and connections are formed in memory, the trauma is incorporated into the psyche where healing can occur. Therefore, rather than denying, hiding, and failing to cope with the emotions, individuals can integrate the trauma and related emotions with the help of their dreams (Hartmann, 2001).

Route to Consciousness and Increased Self-awareness

Ullman, a psychoanalyst and expert on dreams, believes that emotions expressed in dreams can be healing. Most importantly, he says, dreams are the way our affect comes to consciousness at night. He goes on to say that the function of dreams is to explore,

assess, and potentially heal emotional experiences. Thus, according to Ullman, healing comes about as dreams depict recent emotional experiences and interact with past memories, increasing self-awareness when individuals see how these experiences connect (Ullman & Zimmerman, 1982).

Ullman bases his belief that a function of dreams is to heal through self-awareness, on his own experiences working with dreams and on the writings of others who espouse the essential role of emotions in dreams. He states that based on the Gestalt approach Perls introduced, each element of a dream represents unprocessed emotional baggage. In Gestalt dreamwork, dream elements are utilized to gain access to these feelings and thus increase awareness (Ullman & Zimmerman, 1982). Other practitioners point out research which has shown that dreams help alleviate tension as they offer new ways of conceptualizing stressors (Whitmont, 1993). Furthermore, the results of studying 60 research participants, in an attempt to ascertain the effectiveness of interpreting dreams, indicated that individuals find meaning through the process of working with dreams (Hill, Diemer, Hess, Hillyer, & Seeman, 1993). Thus, even if dreams have no inherent function or meaning, as some believe, the process of individuals projecting their own ideas onto the dream content can be healing by increasing self-awareness.

Self-regulation Through Cognitive Processes

Varela (1997) and others expand on the idea that dreams have a function beyond interpretation, with a theory that dreaming is a cognitive endeavor that supports learning by assisting with the establishment of new thought patterns and memory associations as we sleep. He points out that this cognitive function of dreams, which helps us sort through and make sense of each day's thoughts, may contribute to babies, who are

constantly learning new things, needing fifteen to twenty hours of sleep a day (Varela, 1997).

Fosshage (2000, 2002) identifies these cognitive functions of sleep as organizational and feels this is the main purpose of dreaming. He has found that dreams reveal daily life concerns as they relive them in an attempt to maintain psychological order and regulate affect. According to this theory, the organizational effort while dreaming involves cognitive functions similar to those used to assimilate experience in waking life. Waking life events are replayed in dreams and problem solving is employed as events are synthesized, allowing for growth and broadened perspective. An individual who has not expressed their anger during the day may do so in their dreams and thus attempt to restore emotional balance (Fosshage, 2000, 2002).

Other scientists say that dreams also provide an information processing function, so that if animals lack sufficient sleep the process of learning is affected. Studies document changes in human beings' abilities to think creatively, problem solve, master tasks, and process emotions when there is a sleep deficit. It has also been noted that when in a state of emotional upset, individuals require more sleep. It is theorized that this is because dreaming has an adaptive function and can actually alter mood as it regulates affect (Greenberg & Pearlman, 1999).

Another cognitive function of dreams that has been identified is housekeeping. This process of clearing away the remains of the day, which decreases dreamers' autonomic arousal levels and calms emotions during sleep, may explain why depressed individuals feel fatigued and often do not sleep well. It is possible that they tax their brains as they spend the night in dream overdrive, unsuccessfully attempting to soothe

turbulent emotions (Griffin & Kiser, 2003). A study examining emotions preceding and following sleep uncovered significant decreases in emotional intensity, supporting the notion that sleep provides a soothing effect. The study examined emotions reported by 100 participants over 3 nights of dreams (Yu, 2007). This idea is also supported by studies of the limbic system during sleep. This portion of the brain is essential to moving recent events into long-term memory. Long-term emotional memory is formed by this structure as emotion is integrated. Here is how one author interprets the increased activity in the limbic system during sleep documented by these studies: memory is processed at night as we "dream to forget," eliminating unnecessary thoughts, feelings, and associations. At the same time as the "garbage" cluttered in short term memory is cleared out, essential memories are safely filed away in long term memory (Winson, 2002). This process, when performed successfully, refreshes dreamers and helps them prioritize and make sense out of the day's thoughts and events.

Jung's compensation theory, which states that repressed, denied, or unnoticed emotions are expressed in dreams, also connects to the idea that dreams play a role in memory processing. According to Jung, related events are continually linked in memory, forming networks of associations. Moreover, emotionally charged memories have a greater influence than less potent ones and thus create more associative links. He said that unconscious emotions are those that have not yet formed associated links, implying that they have not yet been processed (Jung, 1974).

Despite all these theories, much controversy remains regarding the role of sleep and dreams in the processing of memory and the regulation of thoughts and emotions. Research has been conducted that provides evidence on both sides of the argument, for

and against dreams playing a part in these functions. These studies involve both looking at the stages of sleep and comparing their brain function to when awake and investigating the effects of sleep on waking cognition. The stages of sleep include REM, when most dreams occur, and NREM, which is the slow wave or deepest sleep stage (Hobson, Pace-Schott, & Stickgold, 2000).

Several authors have reviewed the literature and concluded that there is not enough evidence to support one theory related to cognitive activity while sleeping. This theory states that memory is consolidated during REM sleep (Siegel, 2001c; Vertes & Eastman, 2000). Other studies provide additional evidence that contradicts this theory. In one such study, 299 dreams were examined for signs of the prior day's events. It was surmised that these events would appear in dreams if they were being moved to long-term memory during REM sleep. Only one to two percent of the dreams contained the day's events, leading the investigators to conclude that memory consolidation was not taking place (Fosse, Fosse, Hobson, & Stickgold, 2003). This conclusion rests on the untested idea that in order for consolidation to occur, it would need to be reflected in dreams. It also does not take into account the consolidation of memories from events other than the prior day or the symbolic, rather than literal, representation of events in dreams. How dreams influence learning has also been studied and no causal relationship was found. For example, although antidepressants disrupt REM sleep and thus dreaming, learning is not affected (Vertes & Eastman, 2000).

Modulation of Emotion

Other researchers have reviewed the literature and come to different conclusions regarding cognition while asleep. These authors discuss evidence that dreams reflect

waking life, a theory discussed previously in this dissertation but refuted by proponents of the idea that dreams have no cognitive function. Some authors who believe dreams have a cognitive function also introduce the idea that memory consolidation during sleep is linked to individuals processing experience via emotion (Cartwright, 2000; Cartwright, Agargun, Kirkby, & Friedman, 2006). Supporting this theory, brain imaging studies have shown that areas of the brain which process emotion are activated during REM sleep (Revonsuo, 2000). Whereas much research has focused on the effects of sleep on learning, this viewpoint encourages research into another facet of memory consolidation: how we process emotion while asleep. It also explains sleep's apparent lack of effect on learning since the aforementioned sleep studies have not focused on the process of learning through emotion.

Supporting the link between memories, emotions and sleep; dreamers in a study of 299 dreams found 364 dream elements that they related to their waking life (Stickgold, Hobson, Fosse, & Fosse, 2001). Despite this, only five of the elements were replays of the prior day's events. The authors concluded that processing of memories is not standardized and is triggered by emotional concerns that are not only linked to current events but also to the past. Another study that found significant correlation between waking concerns and dreams, focused on 20 depressed and 10 control subjects over a five month period (Cartwright et al., 2006). These authors theorized that dreams were mood regulators, which modulated waking concerns, thus affecting post-sleep mood. Their findings supported this theory. When affect was within a defined range, dreaming helped calm distressed emotional states.

In another study, Cartwright (1996) worked with 70 individuals, 30 of whom were managing the stress of divorce well while 40 were depressed as a result of their break ups. She wanted to ascertain the effects of dreams on emotion. She found that those who participated in follow-up a year later and reported dreaming of their spouses were better adjusted than those who did not. Her conclusion was that their dreams seemed to help regulate their negative affect related to the divorce (Cartwright, 1996).

PET scans performed during sleep support this theory that dreams have a role in the processing of emotion, but not in the more traditional areas of learning. In a study with 10 volunteers the limbic system areas of the brain responsible for emotion and long-term emotional memory were active during REM sleep, while those cerebral cortex areas of the brain responsible for short-term memory, planning and integrating non-emotion laden thoughts were not active (Braun et al., 1998). Since dreams are also most active during REM sleep, this could indicate that emotions are expressed, processed and filed in long-term memory when dreaming. The following section will explore how emotions are regulated both during sleep and while awake.

The Regulation of Emotions in Dreams and Waking Life

This section describes theories related to processing emotions and to the emotional content of dreams as follows: 1) emotion defined, 2) the regulation of emotions in waking life, 3) the expression of emotions in dreams, 4) the role of gender and other factors in dream emotions, 5) the emotional content of trauma survivor's dreams, 6) the continuity of emotions in dreams and waking life, and 7) benefits related to ascertaining the emotional content of dreams.

Emotion Defined

There has been some debate among emotion theorists regarding the definition and categorization of emotion. Based in part on how emotion is defined, as few as two basic emotions and as many as 18 have been identified (Ortony & Turner, 1990). Greenberg and Pascual-Leone (2006) describe "Primary emotions…[as]…a person's most fundamental, direct, and initial reactions to a situation, such as being sad at a loss" (p. 612). Russell and Barrett (1999) point out that "Core affective feelings vary in intensity, [so that]…a person is always in some state of core affect, even if neutral" and that core affect is also "subject to many causal forces" which cannot necessarily be detected (p. 806).

A standard definition of affect among practitioners has also been provided by the Diagnostic and Statistical Manual of Mental Disorders (DSM) IV (American Psychiatric Association, 2000):

> A pattern of observable behaviors that is the expression of a subjectively experienced feeling state (emotion). Common examples of affect are sadness, elation, and anger. In contrast to *mood*, which refers to a more pervasive and sustained emotional "climate," *affect* refers to more fluctuating changes in emotional "weather." What is considered the normal range of the expression of affect varies considerably, both within and among different cultures. (p. 763)

Based on these definitions of emotion and affect, it seems clear that they are behavioral reactions to environmental forces that fluctuate regularly and are experienced uniquely by each individual, often with no awareness of what generated them.

The intensity of emotion varies so that it can range from being barely negligible to overwhelming (Russell & Barrett, 1999). The changes in intensity can be problematic for

some individuals. The DSM IV (American Psychiatric Association, 2000) describes these emotional disturbances as:

- **blunted** Significant reduction in the intensity of emotional expression.
- **flat** Absence or near absence of any signs of affective expression.
- **inappropriate** Discordance between affective expression and the content of speech or ideation.
- **labile** Abnormal variability in affect with repeated, rapid, and abrupt shifts in affective expression.
- **restricted or constricted** Mild reduction in the range and intensity of emotional expression. (p. 763)

Many of these disturbances are related to the inability to effectively manage and process emotion. According to Greenberg and Pascual-Leone (2006), "acknowledging, allowing, and tolerating emotion are important aspects of helping to regulate it" (p. 616). Learning ways to soothe emotional disturbance is also crucial (Greenberg & Pascual-Leone, 2006).

The Regulation of Emotions in Waking Life

Processing emotions is an integral part of life starting from birth. Just as children learn to walk, talk, and eat by mimicking their parents, they also learn how to process emotions in their family units. In fact, emotions play an important role in how people navigate the world. The expression and processing of emotions is one of the primary ways people become connected with those around them. Emotions can also be protective, activating the fight or flight response and causing individuals to act quickly to protect themselves and others (Goleman, 1995).

Goleman (1995) and others explain these functions of emotions from the viewpoint of the brain. The amygdala is the portion of the brain that monitors emotions and connects them to emotional memories. It also controls the fight or flight response, taking over when danger lurks and acting as a sort of emergency response system by

using emotions like fear to encourage quick reactions to threats. The neocortex is another part of the brain that works actively with emotions. Its response is slower and more methodical. The neocortex essentially "thinks" about how to respond, utilizing cognitive functions such as comparison, analysis, and contemplation whereas the amygdala acts quickly, without thinking. Both functions are important when processing emotions. Without the amygdala there would be no feelings or meanings associated with feelings. Without the involvement of the amygdala response to danger would be too slow. On the other hand, without the neocortex all responses would be impulsive and lack cognitive control. Decision-making, for instance, would be virtually impossible without the neocortex's ability to problem solve and reason. Decision-making would also suffer without the amygdala. An example of this is that the amygdala uses emotion to illuminate possible dangers related to various alternatives, contributing to safe choices (Goleman, 1995; Greenberg & Bolger, 2001).

As emotions are connected to memories by the amygdala and to values and ideas by the neocortex, associations are formed that control not just how humans think but also how they behave (Greenberg & Paivio, 1998). Through processing emotions, people learn adaptive behavior that ideally helps them live their lives more effectively (Greenberg, 2004). Positive emotions provide feedback that encourages certain behaviors while negative emotions discourage others. It is through this feedback loop that individuals learn to avoid situations that engender fear and anger and to move towards those that generate joy and happiness (Carver, 2001). This is also how understanding of the world grows: experience occurs; emotions are felt, identified, and connected to past

experiences and to ideas; and the experience is assimilated and filed away for future reference (Greenberg, 2004).

Learning how to harness this process so that it becomes conscious rather than mechanical has been termed "emotional intelligence." Goleman (1995) describes this as a process by which individuals learn to identify and name feelings and to recognize how the feelings connect to ideas and behaviors so that the results of decisions become clear. Besides increased awareness, emotional intelligence involves augmentation of the emotion regulation performed by the neocortex and of the assimilation process with which experience is integrated (Greenberg, 2004). Utilizing emotional intelligence techniques an individual who has been exposed to a dangerous situation that invokes a fearful response, even when there is no longer a threat, can be taught to be aware of the erroneous emotional response; to self-soothe, thereby reducing the amygdala's intense arousal so that the fight or flight signal is extinguished; and to replace the erroneous fearful emotion with an adaptive one such as compassion for self (Greenberg & Bolger, 2001).

Considerable research has been done related to the regulation of emotion through the neocortex versus the amygdala's more instinctual response. Several studies look at the benefits of reappraising situations and the emotional response they engender prior to reacting to them. This process of reappraising is one of the characteristics of emotional intelligence. One such study utilized functional magnetic resonance imaging to examine how reappraisal affected the brain. It was found that those parts of the brain, such as the amygdala, that process emotion were less active after reappraisal, thus reducing the instinctual arousal that leads to impulsive reactions. It was also found that parts of the

brain involved in working memory and cognitive control were more active thus enabling enhanced emotion regulation (Gross & John, 2003; Ochsner et al., 2002).

Other studies compare reappraisal to another method for coping with emotion that does not seem to work as well: suppression. Utilizing this method, individuals suppress their emotional response to an event rather than reappraising or reacting to it (Richards & Gross, 2000). It has been found that individuals who use suppression report more negative emotion and less positive emotion while those who use reappraisal report more positive emotion and less negative. Also individuals who use suppression have worse interpersonal functioning than those who use reappraisal. People who use suppression have poorer memory of associated experience and generally report poorer memory than those who use reappraisal. Finally, based on attributes such as depressive symptoms, self-esteem, and life satisfaction, individuals who use suppression report less well being than those who use reappraisal (Gross & John, 2003; Richards & Gross, 2000).

There has also been research focused on self-awareness, another characteristic of emotional intelligence, and its effect on emotion regulation. One study found that individuals who were able to distinguish discrete negative emotions experienced, were also better at regulating them (Feldman Barrett, Gross, Conner, & Benvenuto, 2001). Others looked at well being and concluded that expressing emotions does not increase well being, but that conflict and control related to emotional expression can lead to distress. In addition, intensity of emotions is affected by both self-awareness and personal standards, so that individuals who think they should suppress do it more when they are more self-aware (King & Emmons, 1991). For those who believe in free expression, on the other hand, emotional intensity was not affected by self-awareness (Silvia, 2002).

Another study looked at well being and found that emotional intelligence in general was linked to increased self-esteem and more positive emotions (Schutte, Malouff, Simunek, McKenley, & Hollander, 2002). As these studies show, there are certainly benefits to the regulatory function carried out by the neocortex. Enhancing the operation of the neocortex utilizing emotional intelligence techniques, rather than letting the impulse-driven amygdala take control, also seems to generally improve individuals' ability to navigate their lives successfully.

The Expression of Emotions in Dreams

Emotions are important. They guide decision-making about direction in life and help determine values. They color how people see the world around them (Hartmann, 2001). Emotions are also crucial to dreams. Underscoring their importance, virtually all dream content analysis rating scales which have been developed have included a mechanism for coding affect (Domhoff, 2003). Despite this, Hartmann's research indicates that only about 25% of dreamers explicitly mention emotion when recording their dreams, although emotion is frequently portrayed in dream images and can thus be accessed indirectly when not explicitly mentioned by the dreamer. When scoring emotions in 748 dreams, for instance, Hartmann (2001) found that when investigators extrapolated emotions from dream images, the emotions extrapolated were judged by the dreamer to be either accurate or close to accurate (Hartmann, 2001).

When specifically asked to report emotion from their dreams, it seems clear that participants are aware of feelings in dreams, just as they are in waking life. In a study with 35 participants attending Harvard University, students recorded their dreams for two weeks and included information requested about dream characters' emotions. The 320

dreams recorded showed the prevalence of emotion in dreams. This was not only true for the dreamers' own emotions but also for the emotions of other dream characters. In these 320 dreams only 19 reported no emotion (Kahn & Hobson, 2005).

The purpose of the aforementioned study was to look at the connection between dream characters and emotion. It was found that 62% of the time dream characters known to the dreamer in waking life were depicted differently than they actually were. Investigators concluded that this was true because the prefrontal cortex, a part of the brain that processes working memory and judgment, is far less active asleep than awake. The areas of the brain which are more active during dreaming are components of the limbic system responsible for processing emotion and components of the cerebral cortex responsible for processing visual images (Kahn, Pace-Schott, & Hobson, 2002). The dominance of these processes during sleep, and the lesser impact of memory and judgment, provides a possible explanation for why accurate memory is often absent in dreams while emotion is prevalent.

In this study, it was also found that the most common emotions reported were affection and joy. Positive emotions like these may have been more prevalent because participants were specifically asked to record emotions. It is possible that individuals do not generally include emotion when recording dreams unless asked, which would explain the dearth of emotions in most dream reports. Furthermore, it may be that when asked to record emotions, dreamers include not only dream feelings but also associated waking life feelings. Supporting this, it has been found that investigators extrapolate less positive emotion when coding previously recorded dreams than dreamers identify on their own when specifically asked about emotion (Kahn et al., 2002).

Conversely, Hall and Van de Castle collected and coded 1,000 dreams of college students who were not specifically asked to record their emotions and found more negative emotions than positive. Happiness, for example, accounted for only 20% of emotions in dreams whereas 45% of men's and 37% of women's emotions in dreams were apprehension and another 22% of men's and 18% of women's dream emotions were confusion (Domhoff, 2003). Other authors have also found that negative emotions dominated dreams. In a study with 635 REM dreams two thirds contained negative emotions, in particular fear and anger (Revonsuo, 2000). In other studies, one with 738 participants and 1,401 dreams and another with 59 participants and 115 dreams, negative emotions were also predominant. In the first study, the most frequent emotions encountered were fear, terror, helplessness, and vulnerability. For the second, where participants were asked to record emotions and their intensity in the dream reports, fear and distress were the most common emotions. These studies also found that the negative emotions reported were more intense than the positive ones. In the first study, this was particularly true for trauma survivors whose dream emotions were more intense than non-trauma survivors. The authors concluded that these results reflected the emotional arousal of the dreamers (Davidson, Lee-Archer, & Sanders, 2005; Hartmann, Zborowski, & Kunzendorf, 2001).

The emotional content of dreams has been further investigated from the viewpoint of REM and NREM sleep. To ascertain whether emotions are as prevalent during REM sleep as NREM one study woke 38 participants twice during REM and twice during NREM sleep and asked what they had been thinking before awakening. It was found that REM sleep, which is when most dreaming takes place, contained more expression of

emotion and volition. The investigators concluded that this is because the limbic systems of the brain, which control emotion and volition, are more active during REM sleep than NREM (Smith et al., 2004). Other authors have also noted the nighttime activation of the limbic system of the brain that processes emotion, theorizing that REM sleep arouses emotion and allows it to be processed and deactivated as we sleep (Hartmann, 2000; Kramer & Barasch, 2000; Panksepp, 2000). The studies and observations outlined in this section of the dissertation serve to highlight the crucial role of emotions in dreams, emphasizing their ongoing presence as we sleep. As noted, this is indicated not only by the content of dreams but also by the activities of the brain during sleep.

The Role of Gender and Other Factors in Dream Emotions

The emotional content of dreams varies for individuals depending on their geographic region, age, gender, and life circumstances. As previously stated, the emotional content of women's dreams varies from men's, with women reporting less apprehension and confusion in dreams. Hall/Van de Castle's normative data of 1,000 dreams of college students also found more emotions in women's dreams. Based on another study comprised of a stratified random sample of 300 individuals, it was found that more women reported dreams than men and that women's dreams contained significantly more emotion. This finding was duplicated in the 1988 Master's thesis of a student studying 804 dreams (Van de Castle, 1995). Women's dreams are also generally longer than men's, and contain more characters (Domhoff, 2003). In one study, it was even found that women have more nightmares than men (Agargun, Kara, Ozer, Selvi, Kiran, & Ozer, 2003) .

Individuals' psychological states can also affect the emotional content of their dreams. In a study with 123 participants and 354 dreams, previous findings were replicated that indicated an association between anxiety and symbolism in dreams. Investigators found that emotions were expressed symbolically for individuals with higher levels of anxiety. They attributed this to inhibition caused by the anxiety (Robbins, Tanck, & Houshi, 1985). Despite the inhibition, however, the emotions were expressed in dreams through symbols, potentially allowing an outlet for the repressed feelings.

Dreams of those who are depressed have also been studied. The emotional content of 26 depressed individuals' dreams was studied for three nights, and it was found that neutral affect in dreams decreased in the second half of each night. For the subset of individuals who were suicidal, negative affect increased in the second half of each night, whereas for those who were not suicidal, positive affect increased. The authors postulated that this reflected successful regulation of emotions at night for those who were not suicidal and unsuccessful regulation for those who were suicidal (Agargun & Cartwright, 2003). Another study examined emotion regulation overnight. Twenty depressed and 10 control subjects were studied over five months as their REM sleep was interrupted, creating shorter REM sleep intervals than normally occur in a night's sleep. It was found that those whose depression improved over the course of the study benefited from the manipulation of REM sleep intervals. The greater number of shorter REM cycles had a positive effect on morning mood, which the authors attributed to the more frequent opportunities to process negative affect during sleep (Cartwright, Baehr, Kirkby, Pandi-Perumal, & Kabat, 2003). These findings support the idea that a function of dreams is to modulate emotion.

The Emotional Content of Trauma Survivor's Dreams

The dreams of trauma survivors, especially those of individuals with the spectrum of trauma related illnesses, are particularly impacted by psychological stress. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM) IV nightmares and sleep disturbances are both symptoms of PTSD (American Psychiatric Association, 2000). Nightmares are often the cause of sleep disturbances, waking trauma survivors and keeping them awake. Although confirming this would require further research, these PTSD issues have been linked with disturbances in REM sleep and hyperarousal while sleeping (Nielsen & Germain, 2000). Studies have also found a higher incidence of nightmares among survivors of trauma and in particular, survivors of sexual abuse and women (Agargun, Kara, Ozer, Selvi, Kiran, & Ozer, 2003; Belicki & Cuddy, 1996).

In a study with 413 children and adolescents, 235 of whom had been traumatized, more threatening events were recorded in the trauma survivors' dreams (Valli, 2006). In a similar study with adults, dreams of 60 women with histories of sexual abuse, 33 with histories of physical abuse, and 70 with no trauma history were examined for differences. It was found that the dreams of sex abuse survivors contained more sexual content, negative emotions, and also more explicit violence. The dreams did not reenact the abuse, but did reenact the emotion of the abuse (Belicki & Cuddy, 1996).

Hartmann (2001) has found similar patterns. His focus has been on contextualizing images in dreams, which he says portray dreamers' key emotions. A dream example he uses is, "I was overwhelmed by a tidal wave." This image contextualizes the emotions of terror and helplessness often experienced by trauma survivors but does not generally reflect the dreamer's actual experience. In a study he

conducted with 451 dreams of trauma survivors post-trauma and 306 dreams of students, some of whom were trauma survivors, it was found that the contextualized images in the dreams of trauma survivors were more intense than those of non-trauma survivors (Hartmann, Zborowski, Rosen, & Grace, 2001). A more recent study also found significant differences in the emotional content of earthquake survivors' dreams as compared to a control group. The study participants consisted of 27 survivors and 27 controls. The survivors had more emotional, horrifying, hostile, uncontrolled and unpleasant dreams (Najam, Mansoor, Kanwal, & Naz, 2006).

Dream recall has also been linked to individuals' abilities to process trauma material. Dreams of 60 individuals injured in life-threatening events were studied and it was found that those with the most distressing dreams, especially ones that were repeats of the actual trauma event, also had the most severe PTSD symptoms. On the other hand, it was found that those with the least severe symptoms recalled fewer dreams (Mellman et al., 2001).

Lavie et al. (1996) studied 33 holocaust survivors and 10 controls and also had findings related to dream recall. They found that well-adjusted trauma survivors recalled fewer and less emotional dreams than those who did not adjust well. Their conclusion was that those who recalled fewer dreams adjusted by defensively repressing the traumatic material (Lavie & Kaminer, 1996). Another study, with 268 children living in a politically violent area and 144 living in a peaceful area, had similar results. The group exposed to trauma recalled more dreams, and in this study it was also found that they did use more repressive coping methods (Punamaki, 1997). Other researchers have found

similar results and also concluded that a low recall rate was due to successful coping (Agargun, Kara, Ozer, Selvi, Kiran, & Kiran, 2003).

In addition to depressed individuals, it has been found that the moods of trauma survivors are regulated during the dreaming process. Not only has research found that trauma dreams often reflect the emotions rather than the events of the trauma, but also that terror, fear, and vulnerability are the main emotions in trauma dreams, which were also frequently threatening (Esposito et al., 1999; Hartmann, 2001; Mallon, 2000; Siegel, 1996). Jung (1974) felt that this was true because trauma dreams often replay the traumatic event or at least the emotions of the event, bringing pieces of trauma memories to consciousness, and then recurring when the entirety of the memory is not assimilated (Jung, 1974). Similarly, Hall (1947) saw dreams as an attempt to resolve conflict. He said that the attempt was not always successful, so that dreams may only express the anxiety of the conflict and offer no resolution (Hall, 1947). Recurring trauma dreams and nightmares are a good example of this attempt and failure to assimilate memories and resolve related conflict.

One way that dreams regulate affect is by enabling the repression of upsetting trauma emotions expressed in dreams, by keeping them out of the conscious reach of dreamers so that they are not recalled. As Punamaki (1999) found in the previously mentioned study with 413 children, negative mood decreased throughout the night for children living in traumatically violent areas. Generally, if their mood was negative in the evening, then their dreams tended to be happy and they awoke with a more positive mood. When their dreams were not happy, on the other hand, they awoke in a negative

mood. The author postulated that the dreams helped by assimilating the trauma material, thus encouraging mastery and improving mood (Punamaki, 1999).

This process of assimilating and gaining mastery occurs as connections are made between the trauma, its associated emotions, and past memories and emotions. According to Hartmann (1998), these connections are propelled by the overwhelming trauma emotions. Integration occurs as dreams help to form links between these trauma emotions and past memories and emotions. The trauma is understood and made sense of in relation to past life events. The failure to do so leads to recurring nightmares as the emotions erupt each night and no connection is made (Hartmann, 1998). Some have wondered whether the nightmare might constitute re-exposure to the traumatic event and thus increase negative traumatic responses. It was concluded that dreams did not constitute re-exposure, but rather had an integrative function, supporting Hartmann's theory (Rothbaum & Mellman, 2001). This integration occurs as the conflict arising from the trauma is processed, transforming the emotions invoked, such as shame and fear, as mastery returns (Lansky, 1991).

Life-threatening illness is another form of trauma that can affect dream content. Kasatkin found after analyzing 10,240 dreams that the physically sick recall more dreams and have more distressing dreams with violent images than those who are healthy (Van de Castle, 1995). Another study found that the dying have more death and aggression in their dreams (Coolidge & Fish, 1983-84). Severe pain also influences dreams as do surgeries, injuries, and other health related trauma, which can cause dreams with images of death and expressions of feelings such as sadness and terror (Jung, 1974). Unexpressed, these feelings can lead to suffering and nightmares (Garfield, 1991). It is

the belief of some that dreams allow access to emotions related to being ill, preventing a loss of consciousness that can deaden emotional life and potentially deteriorate health. Through dreams, emotions such as fear can be encountered head on, unfolding new and generally more positive perspectives (Bosnak, 1997).

Many practitioners believe that strong emotion in dreams indicates something that requires attention. Furthermore, as the dreams are accessed, they help provide new perspectives, increasing understanding of physical illness while they encourage hope (Moss, 1996). In his work with a group of heart transplant recipients, Bosnak (1996a) found that he was able to utilize dreams to help them access and work through inner conflicts as they emotionally integrated their newly transplanted hearts (Bosnak, 1996a). In a similar way it has also been found in working with individuals with chronic illness that their self awareness of both challenges and personal strengths increased as they explored their dreams (Donnelly & Concetta, 1996).

Dreams also help prepare individuals for death by helping them let go of the past, process the loss, and prepare for this final transformative step (Burch, 2003; Guiley, 1998; Mallon, 2000). This has been explained as a process by which dreams guide dreamers through the stages of individuation described by Jung, increasing consciousness and aiding personal development (Welman & Faber, 1992). A nurse who has used dreams extensively to work with the dying emphasizes this process of increasing awareness as crucial. She describes how dreams near death help individuals access parts of themselves, both negative and positive, that they have lost touch with (Muff, 1996).

Other practitioners have found that dreams near death can help individuals come to terms with dying, banishing fear as the dreamers discover hope in their dreams. The

dreams illuminate a future that is both real and positive, so much so for some that death is welcomed as a spiritual transformation. One of the ways dreams facilitate this process is by encouraging life review and reflection, both of which are important components of preparing for death and processing any significant loss (Bulkeley & Bulkeley, 2005).

The Continuity of Emotions in Dreams and Waking Life

There is evidence that dream emotions, such as those expressed in near death and other trauma dreams, parallel those experienced and regulated in waking life. This premise is related in some ways to the idea previously discussed which states that dreams generally reflect waking life, indicating continuity between the two states. Despite indications that this theory has credence, some studies which have looked for signs of the prior day's events in dreams have failed to find that this continuity exists. One explanation for this lack of evident continuity is that events are not necessarily processed in a linear fashion so that it might take a week or more for them to show up in dreams. It is also possible, because the brain links current events to past events as they are processed, that past rather than current events might show up in dreams as the processing occurs. Another explanation for this apparent lack of continuity is related to emotions. Perhaps the continuity that exists is emotional instead of factual, so that the emotions of waking life continue in dreams each night as they are processed.

Research supports the idea that emotional continuity exists between dreams and waking life. Zadra's (1996) study suggests that recurrent dreams are caused by stress and feature predominantly negative emotions. He also found that, although adults who experience recurring dreams also report a diminution in general well being, their moods rally as the dreams cease. Based on this, he concluded that individuals' dreams reflect

their waking life and that no longer experiencing recurrent dreams indicates integration of stressful events as effective coping is utilized (Zadra, 1996). This conclusion is based on the idea that there is continuity between waking and dream emotions. In a similar research vein, a study with 47 participants who recorded their dreams for two weeks, attempted to ascertain whether negative emotions in dreams reflect negative emotions in waking life. It was found that when dreams cause distress for the dreamer, as is often the case with nightmares, low well being while awake is associated with a greater frequency of negative dreams (Blagrove, Farmer, & Williams, 2004).

Other research has attempted to manipulate emotions prior to sleep in order to show that waking life emotions continue in dreams. According to one such study conducted by Witkin and Lewis, dreams after watching stressful movies contain indications of stress (Mallon, 2000). In another study, with 24 female subjects, pleasant suggestions were given to some pre-sleep and unpleasant suggestions were given to others. It was found that those who received pleasant suggestions had more pleasant dreams, whereas those who received unpleasant suggestions had more unpleasant dreams. The authors concluded that dreams are mainly concerned with the emotions of daily events (De Koninck & Brunette, 1991).

In a similar study with 21 male and 24 female students, subjects were shown pictures pre-sleep with positive, negative, and neutral affect. It was found that the pictures influenced their dreams, with the negative affect pictures producing the strongest results. It was also found that although dreams reflected their affect, the pictures themselves did not appear in dreams (Carpenter, 1987). This supports the idea that

emotions continue from awake-time to sleep, but that detailed images from the prior day life do not necessarily remain during sleep.

Conversely, a more recent study looked at how attempting to suppress thoughts influenced dreams. A sample of 202 women and 128 men were asked to think of 2 people, a romantic "crush" and a "non-crush." They were then told to suppress thoughts of one prior to sleep. It was found that subjects dreamed of both, but even more so of the one they tried to suppress. The authors stated that there was no significant difference between the emotions of the two except that eroticism was increased in dreams where thoughts of the "crush" were suppressed prior to sleep. Although it was then concluded that suppressed daytime thoughts, but not emotions, return in dreams, the increased eroticism seems to indicate that emotions were carried over as well (Wegner, Wenzlaff, & Kozak, 2004).

Other studies have considered how life events influence dreams. A study of responses to an earthquake was done, in which 155 students were queried regarding their consequent emotions. Of the 31% of men and 49% of women, who had an unpleasant reaction to the earthquake, over 40% dreamed of the event. Moreover, 70% of those who dreamed of the earthquake reported that the emotion in their dream was identical to their emotion in response to the earthquake (Van de Castle, 1995). Another related study looked at dreams before and after the World Trade Center terrorist attack and found that the emotions in dreams after the attack were more intense than the emotions before. There were 16 subjects in the study. Twenty dreams were analyzed for each subject, 10 before the attack and 10 after (Hartmann & Basile, 2003). In both studies it seems clear that daytime emotions continued in nighttime dreams.

A case study was also done with an individual in Feeling Therapy, examining how the therapy affected the subject's dreams. This type of therapy focuses on identifying and expressing unconscious feelings. It was thought that as the subject progressed in therapy and became consciously expressive of his emotions, his dreams would also change. Supporting this view and the hypothesis that dream emotions reflect waking life, it was found that the subject's dreams did change, becoming less symbolic and more emotionally expressive over the course of the five and a half years and the 754 dreams analyzed (Corriere et al., 1977). Other authors have pointed out that the expression of emotions in dreams can be metaphorical as well as direct, so that emotions can be expressed in images. In one study with 330 participants, this was found to be the case. Emotional stimulation resulted in symbolic imagery representations (Kunzendorf, Hartmann, Thomas, & Berensen, 1999-2000). For example, an animal with sharp teeth could represent "biting anger." Anecdotal reports by practitioners indicate that these metaphors are transformed as the emotions are healed, also indicating that nighttime emotions parallel those experienced during the daytime (Garfield, 1991).

Benefits Related to Ascertaining the Emotional Content of Dreams

Since nighttime emotions parallel those of waking life, it follows that accessing the emotions in dreams offers benefits similar to accessing emotions in waking life. Much has been recently written regarding the benefits of accessing emotion in order to reduce stress. It has been found that the ability to access positive emotions, even when stressed, is an essential element of resilience. This is true because positive emotions have been found to be adaptive (Greenberg, 2004). Increased awareness of emotions has also been purported to be beneficial because when unconscious they can get in the way of the

individuation process. Facing these emotions and grappling with them enables understanding of their deeper meaning and releases their hold on the psyche (von Franz, 1998). Also, psychological healing occurs through catharsis when emotions are brought to light, amplified, and ultimately eradicated (Tick, 2001). Acquiring a sense of authenticity and expressing genuine emotion results from becoming aware of and learning to differentiate feelings (Boa, 1992). Finally, avoiding repression and fostering understanding of emotions relieves their negative hold, increasing self-awareness (Rinpoche, 1998). As previously stated, emotional intelligence, which includes both awareness of emotions and the ability to reappraise prior to reacting emotionally, is both adaptive and beneficial.

Repressed emotions, particularly anger, may contribute to physical ailments such as hypertension and cancer. In a study of 431 men, blood pressure was found to be higher for men living with stress and repressing their anger. The results of other studies also indicate that high blood pressure is linked to the repression or explosive expression of anger. Most studies support the premise that how individuals relate to their feelings can affect their health, with some of the more negative effects resulting from not expressing feelings (Kabat-Zinn, 1991).

Science has uncovered the fact that emotions affect the body so that repressed emotions, such as those experienced during trauma, can be physically trapped, causing survivors to lose contact with both the painful emotions and the body parts holding them. The intestines, for instance, contain an abundance of emotion-regulating neuropeptides and receptors. This may explain why so many emotions, such as butterflies in the stomach, are felt in the gut and why emotional difficulties often cause indigestion and

ulcers. Emotions have also been linked to the immune system, which has been found to operate more efficiently when feelings are expressed rather then repressed. Studies have found better recovery rates in cancer in those who expressed anger. Tumors were also found to grow quicker when transplanted into rats who were under stress (Pert, 1999).

Pert (1999) attributes this finding, which links stress and disease, to emotions. She says that when the psyche is unable to assimilate emotion, it is stored in the body and that this can decrease the efficiency of bodily processes. She explains that this is the case because peptides, which regulate emotions, also control breathing, blood flow, the immune system, digestion, and elimination. Research recording physiological changes, like increased blood flow, in individuals affected by trauma who get in touch with their traumatic memories by writing, illustrates the effect of emotion on the body. The effect of emotions on blood flow can also be observed in stressful situations. Individuals can turn white when upset or red when angry or embarrassed. Decreased blood flow to the brain due to repressed emotion can also affect alertness and the ability to be fully aware. As this repressed emotion is released it can be integrated into the psyche, freeing up the body. Dreams aid this process as emotions are released a little at a time, during sleep (Pert, 1999). Studies have also ascertained the effects of Mindfulness, which includes emotion-focused coping whereby feelings are known, accepted, and appropriately expressed. The investigators reported reduced anxiety, panic attacks and depression in participants (Kabat-Zinn, 1991).

Individuals who are “stuck” in emotions such as grief can become aware of it through their dreams, allowing healing (Mallon, 2000). “…listening to dreams is the clearest, most direct, most easily accessed means of gaining insight into people’s

emotional suffering following an unexpected disaster" (Bulkeley, 2003, p.15). Asking trauma survivors about their dreams can open the channel for communication of feelings such as fear, revitalizing them and increasing their awareness of ways to cope. This is true because based on Bulkeley's (2003) research, dreams generally contain not only negative emotions of the trauma but also positive emotions of survival. Thus, through their dreams trauma survivors can find a new kind of safety in the world, one that creates healing. This entails feeling hope and believing that life has meaning and structure (Bulkeley, 2003). These emotions are held in the body and can be accessed through the images and emotions of dreams, thus increasing awareness and enabling attunement with the embodied emotions (Bosnak, personal communication, 2005).

Specific studies related to these benefits of ascertaining the emotions in dreams include work done on nightmares. During nightmares dreamers report feeling helpless. It has been found that as the sense of helplessness abates in waking life, the nightmares generally do as well. Treatment of nightmares includes decreasing their negative emotional impact by utilizing relaxation and/or pleasant imagery or by understanding and releasing repressed emotions (Galvin & Hartmann, 1990). In a study of 44 sexual assault survivors who experienced chronic nightmares, another form of nightmare treatment was tested. The intent was to ascertain whether having individuals create new dreams from the old nightmares while awake would increase their feelings of mastery over the negativity in their nighttime dreams and thus contribute to a decrease in nightmare frequency. It was found that less negativity and more mastery existed in the newly created dreams. This is a particularly important finding for PTSD sufferers who often have few ways to cope with nightmares (Germain et al., 2004).

Another study looked at dreams of 28 survivors, 14 evacuees, and 18 controls after a firestorm, and found that exploring their dreams helped those affected by the trauma access earlier emotional wounds and connect them to the firestorm, enabling healing of both (Siegel, 1996). The dreams of 316 war veterans were also studied, and it was found that exploring these dreams helped the veterans. When they shared the dreams in a safe place, their intensity diminished. This process was also seen as healing for the participants, supporting the premise that ascertaining emotions in dreams is beneficial to individuals and may be particularly helpful for trauma survivors (Wilmer, 1996).

Encapsulation of the Literature and Theoretical Stances

The review of the literature supports some basic ideas related to this study. The first idea is that dreams have a function. This function of dreams is related to several factors. These factors are that 1) dreams parallel waking life, 2) the emotions of waking life are reflected in dreams, 3) dreams attempt to compensate by finding balance between negative and positive emotion, 4) emotions in dreams propel the process of emotion regulation or balance whereby emotions are processed and integrated, 5) the process of integration involves linking past memories and emotions to current ones, thus making sense out of them, and that 6) emotions are modulated as they are integrated.

Not only do dreams have a self-regulatory function, which is beneficial in and of itself, but purposefully accessing the emotions in dreams can also be beneficial as it promotes the integration process and increases awareness of emotion, a function of emotional intelligence that has been linked to resilience. This is particularly true for those with emotional disturbances, such as trauma survivors whose difficulty assimilating the emotions of the trauma often lead to recurring nightmares. The benefits of this kind of

work are not only emotional, but also physical, since emotional stress has been linked to many physical ailments. Therefore, investigating the emotional content of trauma survivors' dreams has the potential to add to the knowledge base related to dreams, trauma, and emotion and to promote further exploration in this area.

Chapter 4 – Research Design and Methodology

The methodological framework for the research will be established in this chapter of the dissertation by describing a conceptual basis for the design of the study, providing background on why the chosen methodology was utilized and how the decision was made to proceed in this direction. This will lead to explanations of the methodology, data collection procedures, operational definitions and interrater reliability. Human subject issues will also be discussed.

Research Hypotheses

The study was designed in an effort to test four main research hypotheses. The first hypothesis is that the dreams of female trauma survivors contain more emotions than dreams of female non-trauma survivors. The second hypothesis is that the dreams of female trauma survivors contain more intense emotions than dreams of female non-trauma survivors. The third hypothesis is that the dreams of female survivors of human designed traumas contain more emotions than female survivors of traumas not of human design. The fourth hypothesis is that the dreams of female survivors of human designed traumas contain more intense emotions than female survivors of traumas not of human design. A fifth hypothesis, that using both the Hartmann and Hall/Van de Castle scales to quantitatively code emotional content of dreams will obtain similar results, was also tested as a part of the study since data was examined utilizing both scales.

Conceptual Basis for the Study Design

Although the research related to dreams and trauma includes empirical studies with large sample sizes, many of which utilized quantitative analysis of data collected,

the body of knowledge available about dreamwork and trauma remains small and the research is exploratory. In addition, few studies have focused on trauma and emotions, an important area for research, and the focus of this study. Those that did focus on trauma and emotion primarily utilized a single instrument to code the emotional content of dreams. Therefore, the results of this study, which made use of two well-established instruments, are an important addition to the knowledge base in this area. They also enhance the results of prior studies by increasing understanding.

A primarily quantitative approach was chosen for this study for a number of reasons. According to the proponents of this kind of scientific approach, knowledge is verifiable by facts. Sensory experience obtained during observation is one such way of verifying knowledge with facts. Utilizing this method, researchers test a hypothesis that has been constructed deductively from theory by separating facts, which can be verified, from values, which cannot (Babbie, 2002). Variables related to the hypothesis are defined and a means for measuring the variables is determined, data representing the variables is collected and analyzed, and finally, based on the results of these processes, conclusions regarding the hypothesis are drawn (Babbie, 2002). This process fits with one of the purposes of this study, which was to explore the emotional content of trauma survivors' dreams and thus test the hypotheses of the study.

Some investigators argue that the foundation of quantitative positivist research is based on the belief that reality is tangible and that it can be encapsulated, dissected, and studied. The implied assumption is that the observer or the scientist can be separated from the observed, which in social work is often the client, reflecting the idea that it is possible to separate values from facts when analyzing the results of research studies. It is

also assumed that what is observed as true under certain conditions may also be true under similar conditions and that linear causality or cause and effect are a part of all research studies.

Utilizing the proposed instruments, the emotional contents of dreams were observable and objectively quantifiable, so that it was possible to test them as entities separate from the investigator, ultimately comparing the results to other populations. These are all tenets of a quantitative approach which lends itself to scientific knowledge. Although it is widely accepted as a leading paradigm used to build practice knowledge in social work and other disciplines, many, such as Wood (1990), argue that its insistence on operationalism, which leads to context stripping, can be detrimental to social work research. Social work practice, for instance, is dependent on the contexts and meanings behind the facts, so that quantitative research can lose relevance when too much context is stripped away (Wood, 1990). There is contextual information related to trauma survivors' experiences that was not captured for this study. This includes treatment modalities used by trauma survivors whose dreams were included in the study; trauma survivors' stages of recovery and time elapsed since the traumas occurred. Fortunately, context was captured by the qualitative aspect of the study which offset some of what was lost through the quantitative approach.

Despite these arguments, quantitative research continues to be considered by many to be the most valid form of knowledge building. This approach is particularly dominant in the medical profession and other disciplines immersed in the scientific method (Grinnell, 2001). Research in this area is, therefore, an important way to draw attention to, and add validity to, social work practice. Quantitative research on

dreamwork can also work toward increasing its validity as a therapeutic practice in the eyes of the general population. This, combined with other, more client-centered, research methods, can lead to a more balanced view of dreamwork.

Therefore, this research was primarily quantitative, allowing for statistical analysis in which the significance of statistical relationships between data, such as the relationship between the incidence of trauma and the emotional content of dreams, was calculated and reported in tables, charts and other statistical presentation methods. In addition, statistically significant relationships between these variables were identified as a part of this process.

There was a qualitative component to the research as well. This method was utilized to give examples of different types of quantitatively coded dreams. These examples back up the coding systems utilized as they demonstrate how and why emotions in the dreams were coded. They also bring the data alive as they add a descriptive component to the dreams.

Qualitative approaches such as this foster exploration and openness, allowing for the discovery of new ideas and avenues for further study. Including a qualitative component in this study contributed to the exploratory nature of the inquiry as it increased the depth and richness of the research and provided another means to understand the complexities of the dream data. It is the hope of the author that the combined research findings will promote discovery related to the link between the expression of emotions in dreams and recovery from trauma. The overall objective of the inquiries was to provide new directions for future interventions and research in dream work.

Methodological Framework

The content of dreams has been studied since 1838, with the first report on the emotional content of dreams published in 1893 by Calkins, the first female president of the American Psychological Association. In a study of 381 dreams, Calkins found that the majority of emotions they contained were negative. In 1914, another investigator, Horton, published a classification system for coding dreams, including their emotional tone, but never published any statistical findings (Van de Castle, 1995).

Other studies of the emotional content of dreams include one in which a questionnaire on dreams was administered to 89 women and 81 men. The study found the most frequent dream theme among participants to be "frustrated effort." In another study, involving interviews of 25 women and 25 men, women reported more scary dreams and men reported more pleasant ones. Hall coded 2,668 actions from a thousand dreams and found that there were 488 hostile acts as compared to 188 friendly ones and that 64% of the emotions were negative. Interestingly enough, despite the prevalence of negativity, dreamers usually rated their dreams as pleasant (Van de Castle, 1995). Dream studies have also found differences in the emotional content of dreams of: 1) the elderly as compared to young people, 2) men as compared to women, and 3) between cultures (Kane, 1994; Van de Castle, 1995; Zanasi, De Persis, Caporali, & Siracusano, 2005).

Van de Castle worked with Hall to develop the scale most widely utilized in these types of dream content analyses and to compile normative data comprised of one thousand, average dreams from college students. It is hoped that this normative dream data is representative of the general population as Hall and Van de Castle profess. The Hall/Van de Castle scale, which was created to analyze the content of dreams, includes

coding for emotions. Five emotions were identified on the scale since adding more items decreased reliability. The five emotions scored are anger, happiness, sadness, apprehension, and confusion.

There is a precedent in the literature on emotions for utilizing a small set of emotions for the scale. Although identification systems for emotions vary, Ekman (1990), a respected emotion theorist, reviewed the literature twice over more than a 30-year period and found that six emotions dominated across identification systems: anger, happiness, sadness, fear, disgust, and surprise (Ekman, 1990). Of these, there has always been some uncertainty among theorists about surprise (Ortony & Turner, 1990). The Hall/Van de Castle system includes this emotion as a subset of one of the key emotions, confusion. Disgust is also included in this instrument as a subset of the emotion anger. Therefore, the instrument's designation of emotions essentially fits with what the emotional theorists have identified.

Emotions are also scored by intensity using the Hall/Van de Castle scale. Where emotions are described in dreams utilizing intense adjectives, such as "very," the emotions are coded with a plus sign and where the descriptors are diminutive, they are coded with a minus sign (Domhoff, 2003). The use of this scale provides a quantitative approach that enables empirical coding of dream elements according to a precisely formalized process. Unlike most methods of dream analysis, which can involve a high degree of subjectivity such as asking the coder to infer associations to material in the dream or to identify symbolism in the content, Hall/Van de Castle's system is more objective and follows concrete operational definitions. For example, the definition of sadness is:

> All the words that describe an unhappy emotional state are coded in the sadness class. References to physical pain or physical distress are not included in any of the emotional classes. Some examples of terms that would be coded as sadness are: disappointed, distressed, hurt, depressed, lonely, lost, miserable, hopeless, crushed, and heartbroken (Domhoff, Sneider, & Hall, 2006).

Each of the five emotions coded is similarly defined. Emotions are only coded if they are explicitly identified in the dream content, unlike the Hartmann system, where coders must subjectively determine the emotional content of dreams and where less reliability is expected.

The Hall/Van de Castle system was chosen as a data measurement instrument for this research because of its proven reliability. The system contains empirical categories for coding dream content, which have been clearly defined over a two-year trial and error construction process and which have also been widely utilized by researchers since that time. High reliability has been determined by the percentage of agreement method, where similar codes compiled by two independent coders are compared (Domhoff, 2003). In a Canadian study two judges coded 849 dreams with percentages of agreement ranging from 84 to 94%. Other studies have reported 98% to 100% agreement. Numerous studies have also found the normative data collected and utilized for many of the studies to be accurate. One study coded 500 dreams of college students and found few significant differences between them and the normative data (Van de Castle, 1995).

Hartmann used his own quantitative coding system to code trauma dreams for his studies, comparing the emotions contained in the contextualized images of trauma and non-trauma survivors. This is the other instrument that was chosen to code the dreams for the study. There are two problems with Hartmann's studies. First, his scale remains underutilized. It has been used primarily by his research team and would benefit from

further replication of results by other researchers and by use of the scale in a variety of different types of studies. Also, his scale requires a subjective appraisal of the dream content by coders who decide whether there is an image in the dream that contextualizes an emotion, what that emotion is, and how intense it is. This is in contrast to the Hall/Van de Castle system, which relies less on subjectivity since it codes emotions and intensity ratings in dreams only if they are explicitly mentioned in the dream narrative. The validity of Hartmann's studies would, therefore, be increased if their results could be replicated with the Hall/Van de Castle scale, which has been utilized more broadly and has a less subjective means of coding emotions (Domhoff, 2003). The results of this study have the potential to accomplish this objective. Using qualitative dream data to demonstrate how the Hartmann coding was done for the study also served to substantiate the instrument's methodology for coding dream emotions.

Data Collection Issues

Secondary analysis was utilized to study dreams for this research project. This is a noninvasive data collection technique in which data that has been obtained and analyzed by one practitioner is reanalyzed by another, often for different purposes (Grinnell, 2001). Dreams were collected from practitioners and researchers who indicated they had appropriate dreams available. Some of the dreams were collected from researchers who used them for past research projects. Dreams were also collected that were published by authors who stated they were suitable for research and provided permission to use them for this purpose. Others were collected by practitioners as a part of their clinical work with clients. The primary sampling method for selecting dreams was non-probability and purposive (Grinnell, 2001). To this end, the study began by contacting key informants

who are top experts in dreamwork, including many who work with trauma patients. Where possible, dreams were collected from those informants who had appropriate dreams available and were willing to share them. This process also allowed for snowball sampling as key informants recommended other professionals to contact for dreams.

Approximately 20 practitioners and researchers who are all experts in the areas of dreams, emotion, and trauma were contacted. They were very supportive of the research effort and many agreed to share dreams for the study. Fifty dreams were collected from those affected by trauma not of human design and 50 dreams from those affected by human designed trauma. There are also many general dreams available for research purposes. One pool in particular has been used successfully for many studies and contains thousands of dream reports. One hundred general dreams were randomly selected for the study from this pool of dreams.

The dreams collected were categorized as: 1) from survivors of traumas not of human design such as hurricanes or 2) from survivors of human designed trauma such as war. Dreams were collected as written narrative reports and contained no identifying information. Although there is variance in how individuals record their dreams, this is the standard method of collecting dream data for research purposes (Domhoff, 2003). There was no way to identify the dreamer from the dream reports. Anonymous coding was used to identify each dream. Dreams were scanned and stored electronically on a password-protected computer. The original paper copies of the dream reports were stored in a locked file cabinet, as was any paperwork compiled as the dreams were coded and analyzed.

Operational Definitions

The unit of analysis for the proposed study was the dream. Since the dreams were anonymous and there was no interaction with the dreamers during the study, there were no human subject issues. Based on this, an exempt approval was obtained from the Graduate Center Institutional Review Board.

The variables studied were conceptualized as identifying data, categorization data, and dream content data. The identifying data was established by randomly assigning a nominal code, a whole number from one to three hundred that anonymously identified and distinguished the individual dreams.

The categorization data, which was made up of independent variables, first identified whether the dream was from a trauma survivor. This data was initially maintained on a separate database that coders did not have access to so that they would not know which dreams were from trauma survivors and which were not. Dreams were categorized as "Y" to indicate that yes they were from a trauma survivor or "N" if they are not. From dreams of trauma survivors, the type of trauma experienced was designated as either 1) not of human design or 2) human designed. The DSM IV defines traumatic events of human design and not of human design (American Psychiatric Association, 2000). Based on this definition, human designed events experienced by study dreamers have been defined to include military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, or manmade disasters. Events not of human design have been defined to include natural disasters, severe automobile accidents, or being diagnosed with a life-threatening illness.

Other independent variables were coded in order to build a pool with the potential for natural comparisons. For dreams of trauma survivors, this included identification of the specific traumatic events experienced as designated by the DSM IV: 1) military combat, 2) violent personal assault (sexual assault, physical attack, robbery, mugging including developmentally inappropriate sexual experiences without threatened or actual violence or injury), 3) being kidnapped, 4) being taken hostage, 5) terrorist attack, 6) torture, 7) incarceration as a prisoner of war or in a concentration camp, 8) natural disasters, 9) manmade disasters, 10) severe automobile accidents, or 11) being diagnosed with a life-threatening illness (American Psychiatric Association, 2000). This level of detail in coding allowed any differences in results within the categories of survivors of human designed and not human designed trauma to emerge.

Dreams were also coded to indicate which practitioner or researcher supplied them. Practitioners were identified by their initials: TL, JRS, JK, JF, RB, GWD, RHC, KB, JM, PW, EH and MH. This source data provides the ability to highlight any discrepancies in reporting methodologies among practitioners and researchers that may have impacted study results. The length of the dream was recorded. This three digit nominal code, which was reported as the number of words in the dream, may have helped explain differences in emotional content of dreams since long dreams could potentially contain more emotion than short ones.

The dream content data, dependent variables, identified emotion category and emotion intensity, utilizing both the Hall/Van de Castle and the Hartmann systems. Utilizing the Hall/Van de Castle scale, other related dream content variables were also coded since they can be indicative of emotional states. Aggressive, friendly and sexual

interactions were coded; fortune and misfortune were coded; and success and failure were coded. There is no corresponding coding system for these variables utilizing the Hartmann scale. Once the data was analyzed, the additional pieces of source data helped to add another layer of complexity to the outcome since too much uniformity in data does not tend to give a full picture of any issue. The additional data also helped to explain the results obtained by the study.

The Hall/Van de Castle instrument defines emotions as anger, happiness, sadness, apprehension, and confusion. The operational definition for the emotion variable "happiness" utilizing this system is:

> All the words that describe a general state of pleasant feeling tone are included in this class. Some of the terms that would be coded as happiness are: contented, pleased, relieved, amused, cheerful, glad, relaxed, gratified, gay, wonderful, elated, joyful, and exhilarated. (Domhoff et al., 2006).

The operational definition for the emotion variable "anger" is:

> Representative of some of the terms coded under anger are: annoyed, irritated, mad, provoked, furious, enraged, belligerent, incensed, and indignant. As with the following emotional classes, all degrees of intensity are included within each class, and no coding distinction is made between weak expressions of anger such as being peeved or strong expressions such as being infuriated. (Domhoff et al., 2006).

"Sadness" is defined as:

> All the words that describe an unhappy emotional state are coded in the sadness class. References to physical pain or physical distress are not included in any of the emotional classes. Some examples of terms that would be coded as sadness are: disappointed, distressed, hurt, depressed, lonely, lost, miserable, hopeless, crushed, and heartbroken. (Domhoff et al., 2006).

"Apprehension" as:

> The emotions included in this class can be considered related to fear, anxiety, guilt, and embarrassment. Although differences are recognizable among them, all these conditions lead to conscious concern on the part of

> the person experiencing them. The person feels apprehensive about the possibility of physical injury or punishment, or the possibility of social ridicule or rejection. Thus the common denominator underlying these emotions is that the person is uncomfortable because the threat of some potential danger exists. The following terms, which are not meant to be all inclusive, refer to various degrees of apprehension: terrified, horrified, frightened, scared, worried, nervous, concerned, panicky, alarmed, uneasy, upset, remorseful, sorry, apologetic, regretful, and ashamed. (Domhoff et al., 2006).

Finally, the definition of "confusion" is:

> Confusion is generally produced either through confrontation with some unexpected event or else through inability to choose between available alternatives. Some words that may indicate confusion are: surprised, astonished, amazed, awestruck, mystified, puzzled, perplexed, strange, bewildered, doubtful, conflicted, undecided, and uncertain. (Domhoff et al., 2006).

This instrument also captures the intensity of emotions reported in dreams. Where emotions are described utilizing intense adjectives, such as "very," the emotions are coded as intense and where the descriptors are diminutive, such as "a little," they are coded as diminutive. For the purposes of this study, each of the emotions identified by the scale was set up as a separate ordinal variable with these attributes: "0" for no emotions, "1" for diminutive emotions, "2" for emotions that are neither intense nor diminutive, and "3" for intense emotions. Multiple emotions and corresponding emotion intensity were coded for each dream where applicable. Utilizing the Hall/Van de Castle scale, emotions can also be categorized as either positive or negative. Dreams containing the emotion "happiness" are considered positive and those with anger, apprehension, sadness, and confusion to contain negative emotions. These categories were used in the statistical analysis of the dream content.

Aggressive, friendly and sexual interactions were also coded utilizing the Hall/Van de Castle instrument when they appeared in dreams. These interactions are

defined by the scale as follows. Aggression "is a deliberate or intentional feeling or act on the part of one character meant to harm or annoy another character." (Domhoff et al., 2006). The types of aggression are:

> 1) Hostile thoughts – "Covert feeling of hostility or anger without any overt expression of aggression."
> 2) Critical remarks – "Aggression displayed through verbal or expressive activity. Included are such activities as one character yelling or swearing at another or when a character criticizes or scowls at another."
> 3) Rejections and refusals – "This subclass covers all situations where there is an attempt by one character to reject, exploit, control, or verbally coerce another character. Such activity may be expressed through dismissals, demands, refusals, disobedience, or any other type of negativistic or deceitful behavior."
> 4) Dire verbal threats – "An aggressive act in which a serious accusation or verbal threat of harm is made against a character."
> 5) Stealing or destruction of possessions – "An aggressive act which involves the theft or destruction of possessions belonging to a character."
> 6) Being chased – "An aggressive act which involves a character being chased, captured, confined, or physically coerced into performing some act."
> 7) Being attacked – "An aggressive act which involves an attempt to physically harm a character. The attempt may be carried out through personal assault or through use of a weapon. Threatening a character with a weapon is also included in this subclass."
> 8) Murder – "An aggressive act which results in the death of a character." (Domhoff et al., 2006).

Friendliness is defined as a "*deliberate, purposeful* attempt on the part of one character to express friendliness toward another." (Domhoff et al., 2006). The types of friendliness are:

> 1) Friendly thoughts – "Friendliness is felt toward a character but it is not expressed overtly."
> 2) Friendly remarks – "This subclass covers a wide variety of expressions of friendliness that may be conveyed through either verbal or gestural means. Included are such activities as welcoming, greeting, waving hello or goodbye, introducing one person to another person, smiling at someone, phoning or writing someone for a friendly purpose, and sympathizing with or praising someone."

3) Gifts and loans – “Friendliness expressed by offering a gift or loaning a possession to a character.”

4) Offering help – “Friendliness expressed through extending assistance to a character or offering to do so. Included in this subclass are helping, protecting, and rescuing acts.”

5) Invitations and visits – “Friendliness expressed by taking the initiative in requesting a character to share in a pleasant social activity. Included are situations where one character requests another to accompany him to some event, asks for a date, and visits someone. In the latter case, friendliness is coded because visiting implies someone is taking the initiative or an active role in furthering a relationship with another character. Simply associating with a character or jointly participating in an activity is not coded as a friendly act.”

6) Physical affection – “Friendliness expressed through socially acceptable forms of physical contact. Included in this subclass are such acts as shaking hands, cuddling a baby, and dancing. Kissing and embracing are also included when they are clearly nonsexual in intent.”

7) Romance – “Friendliness expressed through a desire for a long-term close relationship with a character. Included in this subclass are getting married, becoming engaged, and falling in love.” (Domhoff et al., 2006).

Sexual interactions are described as sexual expression involving physical contact or fantasies (Domhoff et al., 2006). The types of sexual interactions are:

1) Sexual intercourse – “A character has or attempts to have sexual intercourse with another character.”

2) Sexual caresses – “This subclass involves the various types of non-intercourse activities often preceding intercourse. Included are handling another character's sex organs and related fondling and petting activities. Masturbation is also included in this category.”

3) Sexual kisses – “This subclass covers necking and "nonplatonic" kissing. Kissing as a form of greeting, e.g., between family members, is coded under friendliness.”

4) Sexual overtures – “A character makes sexual overtures to or "propositions" another character.”

5) Sexual thoughts – “A character has sexual thoughts or fantasies about another character.” (Domhoff et al., 2006).

Finally, fortune and misfortune and success and failure were coded. Definitions for success, failure, and fortune follow:

Success – “In order for a success to be coded, the character must be described as expending some energy and perseverance in pursuit of his goal. The objective need not be of epic significance; a successful handling of some difficulty encountered in a character's daily life is sufficient to

qualify. What is important is that the character is confronted by some problem, decides to deal with it, and then works at its solution before eventually managing to succeed."

Failure – "In order for a failure to be coded, the character must be described as expending some energy and perseverance in pursuit of his goal. When a character is not able to achieve his or her desired goal because of personal limitations and inadequacies, a failure is coded."

Fortune – "Fortune is coded when "something good" happens to a character. The "something good" is not the result of an *intentional* beneficial act by another character. That would be coded as friendliness. Neither is the "something good" the result of any purposeful striving by the character. That would be coded as success. A good fortune is coded when there is an acquisition of goods or something beneficial happens to a character that is completely adventitious or the result of a circumstance over which no one has control. A good fortune is also coded if the dreamer is in a bountiful environment. In a word, it might be said that a good fortune is coded whenever a character becomes 'lucky'." (Domhoff et al., 2006).

Definitions for misfortune follow:

1) Death – "A character is dead or dies as a result of accident or illness or some unknown cause. Death because of murder is categorically excluded because it is coded as an aggression."

2) Injury or illness – "A character is injured or ill. This class includes pain, operations, any bodily or mental defects, insanity, amnesia, blindness, etc. Plastic surgery is not counted as an "operation" because it is elective surgery."

3) Accident – "A character is involved in an accident without suffering physical or mental injury; a character loses a possession or has one destroyed or damaged; a character has a defective possession."

4) In danger – "A character is threatened by something in the environment. A threat of falling is classified under the next heading."

5) Falling – "A character is falling or is in danger of falling."

6) Obstructed – "A character encounters an environmental barrier or obstacle: a character is unable to move: a character is lost; a character is late or is in danger of being late. This class of misfortunes includes situations which produce frustration for the character who confronts them. In some cases, the frustrating agent is clearly environmental in origin as when a road is washed out; in other cases, where the character is lost or late, it is possible that the character has made a contribution to the difficulty he or she encounters. However, since the character has not consciously or intentionally produced the difficulty and views the problem as external to himself or herself, it seems more appropriate to treat it as a misfortune that bears upon the character, rather than as a failure in achievement or as an intropunitive aggression. Having encountered the

> obstacle which warrants the misfortune coding, it is possible for success or failure to be coded if the character makes an effort to overcome the barrier and the outcome is described in the dream report." (Domhoff et al., 2006).

Each of the categories described above for aggressive, friendly and sexual interactions and for success/failure and fortune/misfortune were assigned separate ordinal variables for the purpose of this study. The variables were assigned these attributes: "0" for not reported in the dream narrative or "1" for reported in the dream narrative.

Utilizing the second scale for coding dream content data, the Hartmann scale, dependent variables identified similar aspects of emotions in dreams and also introduced two new variables: 1) whether contextualizing images (CI's) existed in the dream and 2) what the contextualizing images were. The attributes of the variable "CI" are "1" for yes or "0" for no, indicating whether or not a contextualizing image exists in the dream. Contextualizing images are descriptions in the dream report that evoke very real pictures of what is occurring in the dream. The continuous variable "contextualizing image" is defined as:

> …a striking, arresting, or compelling image – not simply a story – but an image which stands out by virtue of being especially powerful, vivid, bizarre, or detailed (Hartmann, Zborowski, & Kunzendorf, 2001).

Here are some examples of contextualizing images:

"driving too close to edge" from the dream:

> <u>Getting on onramp in CO, new man in my life and I feel good</u>
> I remember that it's night time, I'm in Colorado getting on an onramp, driving a little to close to the edge of the side railing, but I'm okay, There is a new man in my life somehow. I feel good, that's all I remember. The onramp in going in a clockwise direction.

"tornadoes dark and menacing" from the dream:

> I dreamed of tornadoes and they were dark and menacing. I went into a building with another woman and we had to hold two glass doors shut

> against the force of the wind. We placed our backs against the doors as the tornado struck. The wind caused the glass to shatter and we had to pick shards off our backs (of glass). There were two double sets of glass doors here. One behind us and one in front of us.

"shark jumps out of the water" from the dream:

> I am on a flat-topped barge or I am watching a man who stands on the deck of a flat-topped barge. A shark jumps out of the water and attacks him. It happens so fast that he has no chance to respond. He's rattled but manages to say, "The shark only raped me."

The maximum length for the contextualizing image variable is 45 characters. Two contextualizing images can be reported for each dream utilizing this scale. For the purposes of the study, if more than two images were identified, they were also coded. The two most powerful emotions were input in the database and a third variable, number of CI's, was established to track how often this occurs.

Emotions contained in contextualizing images were coded as well. Hartmann's scale includes a greater number of attributes for emotion than Hall/Van de Castle's. The attributes of the variable "emotion" are 1) fear, terror; 2) helplessness, vulnerability, being trapped, being immobilized; 3) anxiety, vigilance; 4) guilt; 5) grief, loss, sadness, abandonment, disappointment; 6) despair, hopelessness (giving up); 7) anger, frustration; 8) disturbing – cognitive dissonance, disorientation, weirdness; 9) shame, inadequacy; 10) disgust, repulsion; 11) power, mastery, supremacy; 12) awe, wonder, mystery; 13) happiness, joy, excitement; 14) hope; 15) peace, restfulness; 16) longing; 17) relief, safety and 18) love (relationship). Up to two emotions can be coded for each contextualizing image identified. Here are some examples of emotion coding from the dreams previously mentioned: "driving too close to edge" would be coded as "Fear, terror," "tornadoes dark and menacing" would be coded as "Helplessness, vulnerability,

being trapped, being immobilized" and "shark jumps out of the water" would be coded as "Shame, inadequacy."

The Hartmann scale also includes emotion categories: A) powerful negative emotions are defined as emotions 1 and 2 listed above, B) other negative emotions are defined as emotions 3 through 10 and C) positive emotions are defined as emotions 11 through 18. These categories were used in the statistical analysis of the dream content.

Finally, the intensities of the images in dreams were coded. Attributes for the variable "CI intensity" are 0, .5, 1, 1.5, 2, 2.5 or 3 with 0 representing no contextualizing image in dream and 3 representing "about as striking and powerful an image as you have seen." (Hartmann, Zborowski, & Kunzendorf, 2001). Here are some examples of emotional intensity coding from the dreams previously mentioned: "driving too close to edge" would be coded as "1," "tornadoes dark and menacing" would be coded as "2.5" and "shark jumps out of the water" would be coded as "3."

After initially reading each dream, coders also reported their own reactions to the dream in several ways creating additional dependent variables. First they reported whether it is - "1" - or is not - "0" - from a trauma survivor. They also utilized a 7-point Likert scale to code the extent to which they believed the dream was from a trauma survivor. Dreams were then categorized to indicate whether they contained a traumatic event. In order to do this coding, dream content was examined based on the DSM IV (American Psychiatric Association, 2000) criteria for PTSD to identify trauma material within the dreams:

> Traumatic events that are experienced directly include, but are not limited to, military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration

> camp, natural or manmade disasters, severe automobile accidents, or being diagnosed with a life-threatening illness. For children, sexually traumatic events may include developmentally inappropriate sexual experiences without threatened or actual violence or injury. (p. 424)

Dreams containing trauma material based on DSM IV criteria were coded "1" and dreams that did not were coded "0." In some cases, the coder might have believed that the dream contained traumatic material even though it did not meet DSM IV criteria. A variable was developed to capture this, coding "1" for agree with DSM IV criteria for this dream or "0" for disagree.

Coders were then asked to identify emotions (if any) that the dream evoked in them and to code the emotions utilizing the 18 attributes of Hartmann's emotion scale (see proceeding paragraph for a description of the variables contained in the scale). They were also asked to rate the intensity of the emotion experienced on a 7-point Likert scale.

Interrater Reliability of the Coding Process

Interrater reliability was tested as a part of the study. Two independent investigators, who were trained in the process, each coded the entire database of study dreams so that the results could be compared and interrater reliability determined. The coders were social workers with training in trauma (one was the author of the study). The intent was to achieve 80 percent or more agreement between the coders. In order to achieve this goal, the following training was conducted.

In the first training session, two documents, 1) the Dream Coding Sheet and 2) Coding Sheet Instructions with a Coding Example were reviewed (see appendix for samples of these items). The Coding Sheet Instructions outline how to complete the Dream Coding Sheet. A sample dream is utilized within the instructions to illustrate the

coding process. Short definitions for fields coded are included on the Dream Coding Sheet. The Instructions include more in depth explanations of all terms.

The Coding Sheet is comprised of three parts. The first part codes emotions, interactions, and outcomes specifically mentioned in the dream reports. The second part documents contextualized images identified by the coders. The third part codes the coders' own emotional reaction to the dream and the likelihood of the dream being from a trauma survivor.

Once each part of the Coding Sheet and Instructions had been reviewed in detail and questions had been clarified, both coders reviewed and coded three dreams for practice. The results of the coding were compared and discussed. Differences in coding were examined and resolved so that both coders agreed on a final coding scheme for each dream.

In the second training session, a similar procedure was used as the coders read and coded six dreams and discussed the results. Besides going over the results in detail and discussing the coding until a consensus was reached, general questions regarding the coding process were also clarified. The percentage of agreement between the coders was calculated for these six dreams and the result was 76.2 percent, with less agreement in the second part of the Coding Sheet. This section, unlike the first part of the Coding Sheet, does not code what is specifically reported in the dream but rather requires the coder to determine whether they think a contextualized image exists. All parts of the Coding Sheet were discussed and compared but percentage of agreement was only calculated for the first two parts since the third part is more subjective. This section asks for the coder's

reaction to the dreams in terms of the emotions evoked and their intensities. It also queries, in several different ways, the dreamer's trauma status.

Prior to the third meeting, a first set of ten study dreams was reviewed and coded by each coder. The results were compared and discussed during this meeting. There was agreement on coding of most of the items in the first part of the Coding Sheet, but there was still much less consensus with the second part. The overall percentage of agreement was 82.3 percent. The percentage of agreement was 38.4 percent for the fields in the second part of the Coding Sheet, with the coding of emotions in the dream images resulting in the highest agreement. During this meeting, the emphasis was on how to code the second part of the Coding Sheet, the contextualized image (CI) measure. Much time was spent clarifying when an image exists. Coded data obtained from the coding scheme's author was scrutinized in order to ascertain appropriate coding.

Prior to the fourth meeting, a second set of ten study dreams was reviewed and coded by each coder. The results were compared and discussed during this meeting. The overall percentage of agreement was 93 percent. The percentage of agreement was 73.8 percent for the fields in the second part of the Coding Sheet, with the coding of emotions in the dream images continuing to result in the highest agreement.

After about 30 dreams were coded Hartmann was consulted. He is the author of the second part of the Coding Sheet (the CI scale), which measures contextualized images (CI's) in dreams. Both coders scored 10 practice dreams he provided. It was found that the coders were giving the contextualized images lower scores than other coders who had previously scored the 10 practice dreams. Therefore, less CI's were recorded and those that were, were coded as lower in intensity. The author of the scale also provided

clarification on other scoring issues such as when to code a CI, when and how to choose emotions for the CI and how to describe the CI for coding purposes.

After this consultation, the percentage of agreement for the second part of the Coding Sheet improved considerably. When 90 dreams were coded, the cumulative percent of agreement was 71.5 for the second part of the Coding Sheet and 91.4 percent overall. At this point, the coders began to work completely independently with no discussion of the results of the coding. The percentage of agreement was calculated once all the dreams had been coded. The overall percentage of agreement was 90.6% and the percentage of agreement for the fields in the second part of the coding sheet was 69% with a 73.3% agreement on the coding of emotions in the dream images. As a result of the percentage of agreement between coders being excellent overall thus establishing reliability, only the data coded by the author of the study was input for statistical analysis.

Chapter 5 – Research Findings

In this chapter of the dissertation, the research findings will be reported and discussed. The quantitative analysis and presentation of data will be covered first followed by the qualitative.

Quantitative Analysis and Presentation of Data

Preliminary quantitative examination of the data involved compilation of data frequencies and measures of central tendency and dispersion. The data from the two dream content scales, the Hall/Van de Castle and Hartmann scale, were examined first in order to describe the occurrence of dream elements.

Hall/Van de Castle Scale Data

The Hall/Van de Castle scale measures emotions, social interactions and other dream elements recorded in dreams transcribed by dreamers. The social interaction categories measured by the scale are aggression, friendliness and sexuality. Other dream elements include success/failure and fortune/misfortune. Upon examination of these dream elements, it was found that emotion (69%), misfortune (57.5%) and aggression (51%) had the highest frequencies and that sexuality (7%) and fortune (5%) had the lowest (see table 1).

Table 1. Dream Content Category Frequencies

Category	Frequency	Percentage
Emotion	138	69.0
Misfortune	115	57.5
Aggression	102	51.0
Friendliness	93	46.5
Success/Failure	27	13.5
Sexuality	14	7.0
Fortune	10	5.0

The individual emotions measured by the scale (anger, happiness, sadness, scared/apprehension and confusion) were examined next. It was found that scared (39%) and happy (22.5%) had the highest frequencies and that angry (10%) and sad (9%) had the lowest (see table 2).

Table 2. Dream Emotion Frequencies

Emotion	Frequency	Percentage
Scared	78	39.0
Happy	45	22.5
Confused	39	19.5
Angry	20	10.0
Sad	18	9.0

The scale also measures negative emotions and positive emotions. Utilizing this measure, it was found (see table 3) that negative emotions (scared, confused, angry and sad) had a higher overall frequency, 117 (58.5%), than positive emotions (happy), which had a frequency of 45 (22.5%). The larger number of negative emotion categories included in the scale may contribute to their higher frequency.

Table 3. Negative/Positive Emotion Frequencies

Emotion	Frequency	Percentage
Negative	117	58.5
Positive	45	22.5

The scale measures emotion intensity as well. Emotions are scored on a scale of 1 to 3 with 1 as the lowest intensity of emotion and 3 the highest. When emotion intensities were examined, scared, the emotion with the highest emotion frequency overall, also had the highest frequency of intense emotion. However, the intensity mean for scared was low (2.2) because most were coded with an intensity of 2 (49%). The highest intensity means (2.4) were for the emotions sad and anger which both had a high percentage of dreams coded as 3 (44% and 45%). These were also the emotions with the lowest frequencies overall (see table 4).

Table 4. Emotion Intensity Means and Frequencies

	Scared	Happy	Confused	Angry	Sad
Mean	2.2	2.2	2.3	2.4	2.4
3	29% 23	22% 10	26% 10	45% 9	44% 8
2	63% 49	78% 35	74% 29	50% 10	56% 10
1	8% 6	0% 0	0% 0	5% 1	0% 0

3 = a lot of emotion, 2 = emotion, and 1 = some emotion.

The social interaction categories measured by this scale with the highest frequencies were misfortune (57.5%), aggression (51%) and friendliness (46.5%). The scale also measures individual subcategories of social interactions within each category. The individual interactions for misfortune include death, injury or illness, accident, danger, falling and obstructed. Within this category, danger (28.5%) and obstructed

(23%) were found to be the most frequent misfortunes whereas death (5.5%) and falling (7%) were the least frequent (see table 5).

Table 5. Misfortune Frequencies

Misfortune	Frequency	Percentage
Danger	57	28.5
Obstructed	46	23.0
Injury/Illness	24	12.0
Accident	21	10.5
Falling	14	7.0
Death	11	5.5

The aggression interaction category measures hostile thoughts, critical remarks, rejections and refusals, dire verbal threats, stealing and destruction of possessions, being chased, being attacked and murder. Within the aggression category, rejections (23.5%), critical remarks (12.5%) and attacks (12%) were found to be the most frequent interactions whereas threats (3.5%), stealing (2.5%) and murder (1.5%) were the least (see table 6).

Table 6. Aggression Frequencies

Aggression	Frequency	Percentage
Reject	47	23.5
Critical	25	12.5
Attack	24	12.0
Chase	17	8.5
Hostile	9	4.5
Threat	7	3.5
Steal	5	2.5
Murder	3	1.5

Friendliness measures friendly thoughts, friendly remarks, gifts and loans, offers of help, invitations and visits, physical affection and romance. Within this category, offers of help (23.5%) and friendly thoughts (17.5%) were found to be the most frequent interactions while romance (4.5%) and friendly remarks (4.0%) were the least (see table 7).

Table 7. Friendliness Frequencies

Friendliness	Frequency	Percentage
Offer help	47	23.5
Friendly thought	35	17.5
Invite or visit	16	8.0
Affection	12	6.0
Gift or loan	10	5.0
Romance	9	4.5
Friendly remark	8	4.0

Hartmann Scale Data

The Hartmann scale measures contextualized images in dreams. These are descriptions in the dream report that evoke very real pictures of what is occurring in the dream. Unlike the Hall/Van de Castle scale, which only scores dream elements recorded in the dream report, these images are extrapolated from the dream by the coder. The coder not only finds images in dream reports but also determines the intensity of the images and whether they contain emotions. The scale measures these items related to the contextualized image (CI). Each CI is measured on an intensity scale. CI intensities are measured on a scale of 0 to 3. Coders are allowed to choose not more than two emotions per CI. When CI elements were examined, the frequency of the elements was found to be

high in most dreams. Eighty-four percent had a CI image and 78% had at least one CI emotion (see table 8).

Table 8. Contextualized Image Frequencies

Categories	Frequency	Percentage
CI Intensity	168	84.0
CI Emotion	156	78.0

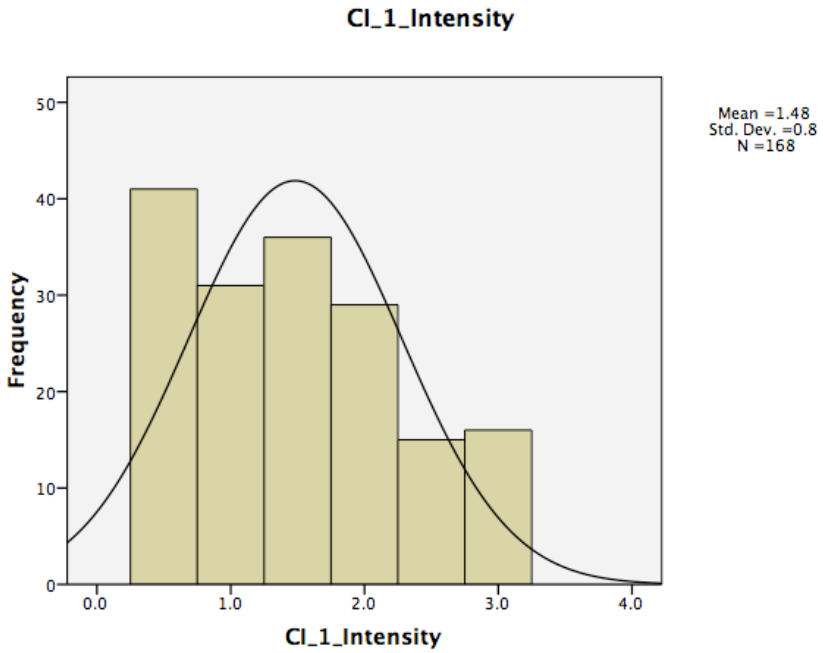
The intensity of CI's was looked at with some interesting results. The intensities of the primary CI reported were examined first. The intensity levels for this CI seemed to be evenly distributed throughout the scale (see table 9) with a median of 1.5 and a mean of 1.48. The standard deviation was .80 (see chart 1).

Table 9. First CI Intensity Frequencies

First CI Intensity	Frequency	Percentage
No 1st CI coded	32	16.0
0.5	41	20.5
1.0	31	15.5
1.5	36	18.0
2.0	29	14.5
2.5	15	7.5
3.0	16	8.0

0.5 = lowest intensity and 3.0 = most "striking and powerful" image.

Chart 1. First CI Intensity Frequencies



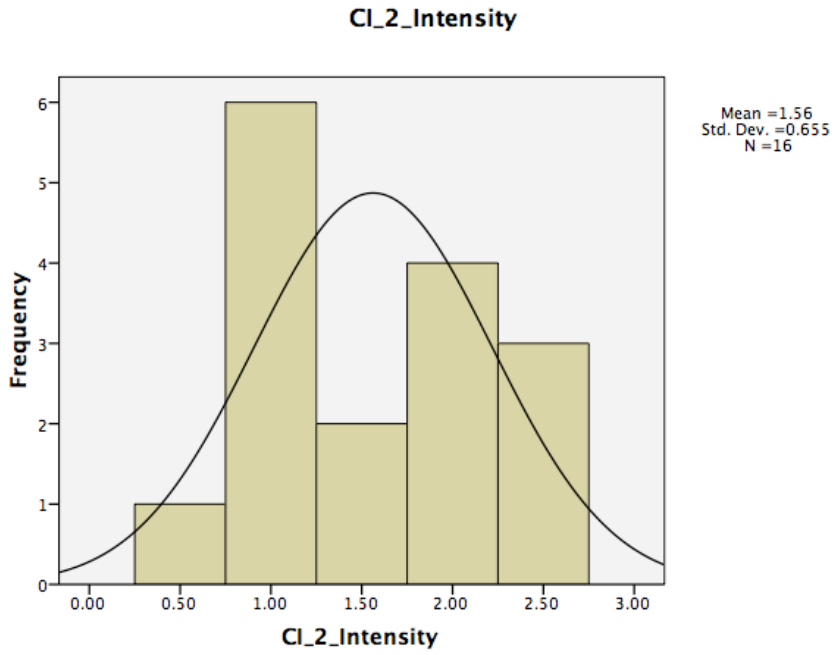
For those dreams with more than one CI, the second CI's reported were somewhat more intense, however there were only 16 dreams in this category. Again, most CI's reported were in the intensity range of 1.0 to 2.0 (see table 10) with a median of 1.5 and a mean of 1.56. The standard deviation was .66 (see chart 2).

Table 10. Second CI Intensity Frequencies

Second CI Intensity	Frequency	Percentage
No 2nd CI coded	184	92.0
0.5	1	0.5
1.0	6	3.0
1.5	2	1.0
2.0	4	2.0
2.5	3	1.5
3.0	0	0.0

0.5 = lowest intensity and 3.0 = most "striking and powerful" image.

Chart 2. Second CI Intensity Frequencies



The individual CI emotions measured by the scale were also examined. The scale measures these emotions: fear, helplessness, anxiety, guilt, grief, despair, anger, disturbing, shame, disgust, power, awe, peace, happiness, hope, longing, relief, and love. Fear (24.7%) and helplessness (22.9%) had the highest frequencies. The other emotions were present in less than 10% of cases (see table 11).

Table 11. CI Emotion Frequencies

CI Emotion	Frequency	Percentage
Fear	67	24.7
Helpless	62	22.9
Anxious	22	8.1
Anger	22	8.1
Grief	15	5.5
Happy	14	5.2
Power	12	4.4
Awe	12	4.4
Disturbing	8	3.0
Shame	8	3.0
Disgust	7	2.6
Relief	6	2.2
Love	6	2.2
Peace	4	1.5
Guilt	3	1.1
Longing	2	0.7
Despair	1	0.4
Hope	0	0.0

The scale measures negative emotions (fear, helpless, anxiety, guilt, grief, despair, anger, disturbing, shame, and disgust), positive emotions (power, awe, peace, happiness, hope, longing, relief, and love) and powerful negative emotions (fear and helplessness). As with the Hall/Van de Castle scale, it was found that negative had a higher frequency than positive. Powerful negative emotion also had a higher frequency than positive emotion (see table 12).

Table 12. CI Negative/Positive Emotion Frequencies

CI Emotion	Frequency	Percentage
Negative	136	68.0
Powerful Negative	79	39.5
Positive	64	32.0

Coder Responses to Dreams

In addition to the emotions found in the dream, the emotions and the intensity of the emotions evoked in the coder upon reading the dream were also recorded. The emotions from the CI scale (fear, helplessness, anxiety, guilt, grief, despair, anger, disturbing, shame, disgust, power, awe, peace, happiness, hope, longing, relief, and love) were measured and the same classification of positive (power, awe, peace, happiness, hope, longing, relief, and love), negative (fear, helpless, anxiety, guilt, grief, despair, anger, disturbing, shame, and disgust) and powerful negative (fear and helplessness) emotion was utilized for emotions evoked in the coder. It was again found that negative had a higher frequency than positive emotions. Although powerful negative emotion had a lower frequency than negative emotion, it had a higher frequency than positive emotion (see table 13). Among emotions, fear (18.5%) and helpless (18.0%) had the highest frequencies and guilt (1.0%) and despair (0.5%) the lowest (see table 14). Shame had a much higher frequency in this category (6.4%) than it had for CI emotions (3.0%). The intensities reported for evoked emotion were similar to the CI intensities with a median frequency of 3.0, a mean of 3.64 and a standard deviation of 1.332 (see table 15).

Table 13. Coder Negative/Positive Emotion Frequencies

Coder Emotion	Frequency	Percentage
Negative	165	82.5
Powerful Negative	87	43.5
Positive	62	31.0

Table 14. Coder Emotion Frequencies

CI Emotion	Frequency	Percentage
Fear	72	18.5
Helpless	70	18.0
Anxious	51	13.1
Anger	36	9.3
Shame	25	6.4
Happy	19	4.9
Grief	16	4.1
Disgust	14	3.6
Awe	14	3.6
Relief	14	3.6
Hope	14	3.6
Power	13	3.3
Disturbing	7	1.8
Peace	6	1.5
Longing	6	1.5
Love	6	1.5
Guilt	4	1.0
Despair	2	0.5

Table 15. Coder Emotion Intensity Frequencies

Emotion Intensity	Frequency	Percentage
1	24	12
2	46	23
3	60	30
4	44	22
5	16	8
6	8	4
7	2	1

1 = lowest overall intensity and 7 = highest overall intensity.

Coders were also asked to score whether they thought the dream was from a trauma survivor or contained trauma material. There were 100 trauma dreams in the study and 100 general dreams. Coders judged 91 (45.5%) of the dreams to be from trauma survivors (see table 16). In judging trauma events in the dreams, according to DSM IV criteria, the frequency was much lower. Forty-six dreams (23.0%) were found with trauma events (see table 17).

Table 16. Dreamer Trauma Survivor Frequencies

Trauma Survivor	Frequency	Percentage
No	109	54.5
Yes	91	45.5

Table 17. Dream Trauma Event Frequencies

Trauma Event	Frequency	Percentage
No	154	77.0
Yes	46	23.0

Hypotheses Testing

Comparisons were made between the elements contained in dreams of 100 trauma survivors and those of 100 general dreams. Cross tabulation and chi square analysis were used to determine which elements in dreams were associated with the dreamer being a trauma survivor. Comparisons were also made between dreams by trauma type. Dreams were coded with two trauma types: 1) not of human design or 2) human designed. Based on the DSM IV definition (American Psychiatric Association, 2000), human designed events were defined to include military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, or manmade disasters. Events not of human design were defined to include natural disasters, severe automobile accidents, or being diagnosed with a life-threatening illness.

Hall/Van de Castle Scale Data

The Hall/Van de Castle scale data was examined first. The emotion and social interaction categories measured by the scale were tested for association with whether or not the dreamer was a trauma survivor. A significant association (p levels equal to .001 and .007) was found for the social interaction categories of sexuality and misfortune. There was no significant association for the other categories including emotion (see table 18). Most categories also reported higher percentages for trauma survivors. Sexuality had the highest percentage at 92.9% for trauma survivors and only 7.1% for general dreams. However, the number of dreams in this category was low with only 14 having sexual content. Despite the low number, when a Fisher's Exact Test was done to take this into account, the association remained significant (.001). The misfortune category might be

more relevant as there were 115 occurrences of this type of social interaction. Fifty-eight point 3 percent of trauma dreams had misfortune compared to 41.7% of general dreams. The other dream content areas did not have significant differences between trauma and general dreams. Friendliness was the only category where there was a higher percentage for general dreams than trauma dreams, 53.8% versus 46.2%.

Table 18. Dream Content Category Association to Trauma Survivor

Category	% Trauma	% General	Chi-Square	p level	Phi Coefficient
Sexuality (n=14)	92.9	7.1	11.06	.001*	.24
Misfortune (n=115)	58.3	41.7	7.38	.007	.19
Friendliness (n=93)	46.2	53.8	.99	.32	-.07
Success/Failure (n=27)	55.6	44.4	.39	.54	.04
Emotion (n=138)	51.4	48.6	.37	.54	.04
Aggression (n=102)	52.0	48.0	.32	.57	.04
Fortune (n=10)	50.0	50.0	.00	1.00	.00

** Fisher's Exact Test = .001*

The individual emotions measured by the scale (anger, happiness, sadness, scared/apprehension and confusion) were examined next. No significant association was found for any of the individual emotions (see table 19). However, a higher percentage of these emotions were reported for trauma survivors: sadness (61.1%), scared (52.6%) and happiness (51.1%). And a lower percentage of trauma survivors reported confusion in their dreams, 46.2% versus 53.8%.

Table 19. Dream Emotion Association to Trauma Survivor

Emotion	% Trauma	% General	Chi-Square	p level	Phi coefficient
Sad (n=18)	61.1	38.9	.98	.32	.07
Scared (n=78)	52.6	47.4	.34	.56	.04
Confused (n=39)	46.2	53.8	.29	.59	-.04
Happy (n=45)	51.1	48.9	.03	.87	.01
Angry (n=20)	50.0	50.0	.00	1.00	.00

Negative (scared, confused, angry and sad) and positive (happy) emotions measured by the scale were also examined. No significant association was found for either category and the percentage reported in each was analogous for trauma and general dreams (see table 20).

Table 20. Negative/Positive Emotion Association to Trauma Survivor

Emotion	% Trauma	% General	Chi-Square	p level	Phi coefficient
Negative (n=117)	51.3	48.7	.19	.67	.03
Positive (n=45)	51.1	48.9	.03	.87	.01

When Hall/Van de Castle emotion intensities were examined utilizing a t-test to test how likely it was that intense emotions were from trauma survivors' dreams, the result was not statistically significant (p level greater than .05). Emotion intensity scores of dreams from trauma survivors were similar to those of general dreams with mean scores of 2.24 for trauma dreams versus 2.29 for general dreams (see table 28).

Table 21. Emotion Intensity by Trauma/General Dream

Dream	Mean Intensity	SD	t	p level
Trauma	2.24	2.06	-1.71	.433 (for one-tailed test)
General	2.29	2.09		

Individual subcategories of dream social interactions were examined for association next. For interactions with misfortune (death, injury or illness, accident, danger, falling and obstructed), there was a significant association for the misfortune subcategory of danger (p level equal to .001). No significant association was found for the other interactions with misfortune (see table 22). A higher percentage of trauma survivors' dreams than general dreams were reported in all misfortune categories except death (45.5% trauma).

Table 22. Misfortune Association to Trauma Survivor

Interaction	% Trauma	% General	Chi-Square	p level	Phi coefficient
Danger (n=57)	68.4	31.6	10.82	.001	.23
Falling (n=14)	71.4	28.6	2.77	.10	.12
Injury/Illness (n=24)	62.5	37.5	1.71	.19	.09
Accident (n=21)	61.9	38.1	1.33	.25	.08
Obstructed (n=46)	54.3	45.7	.45	.50	.05
Death (n=11)	45.5	54.5	.10	.76	-.02

With aggressive interactions (hostile thoughts, critical remarks, rejections and refusals, dire verbal threats, stealing and destruction of possessions, being chased, being attacked, and murder), there was a significant association for the aggressive subcategory of attack (p level equal to .03). No significant association was found for the other aggressive interactions (see table 23). Attack (70.8%) and threat (71.4%) were reported for a much higher percentage of trauma survivors' dreams than general dreams. Despite the low number of dreams with attacks, when a Fisher's Exact Test was done to take this into account, the association remained significant (.04).

Table 23. Aggression Association to Trauma Survivor

Interaction	% Trauma	% General	Chi-Square	p level	Phi coefficient
Attack (n=24)	70.8	29.2	4.74	.03*	.15
Threat (n=7)	71.4	28.6	1.33	.25	.08
Critical (n=25)	44.0	56.0	.41	.52	-.05
Murder (n=3)	66.7	33.3	.34	.56	.04
Reject (n=47)	46.8	53.2	.25	.62	-.04
Steal (n=5)	40.0	60.0	.21	.65	-.03
Hostile (n=9)	55.6	44.4	.12	.73	.02
Chase (n=17)	47.1	52.9	.06	.80	-.02

** Fisher's Exact Test = .04*

Friendly interactions measured by the scale (friendly thoughts, friendly remarks, gifts and loans, offers of help, invitations and visits, physical affection, and romance) were examined next. No significant association was found for any of these interactions

(see table 24). The percentage of romance reported for trauma survivors' dreams was low (22.2%) but affection was relatively high (66.7%).

Table 24. Friendliness Association to Trauma Survivor

Interaction	% Trauma	% General	Chi-Square	p level	Phi coefficient
Romance (n=9)	22.2	77.8	2.91	.09	-.12
Affection (n=12)	66.7	33.3	1.42	.23	.08
Offer help (n=47)	44.7	55.3	.70	.40	-.06
Friendly remark (n=8)	62.5	37.5	.52	.47	.05
Gift or loan (n=10)	40.0	60.0	.42	.52	-.05
Friendly thought (n=35)	54.3	45.7	.31	.58	.04
Invite or visit (n=16)	50.0	50.0	.00	1.00	.00

The Hartmann Scale Data

The Hartmann scale data was then examined, starting with intensity of contextualized images (descriptions in the dream report that evoke very real pictures of what is occurring in the dream). A t-test was done to determine how likely it was that intense contextualized images were from trauma survivors' dreams. CI intensity scores of dreams from trauma survivors were much higher (M = 1.74) than general dreams (M = .99) indicating that trauma dreams were much more intense (see table 25). The result was statistically significant ($t(198) = 5.46$, $p < .001$ for one-tailed test).

Table 25. CI Intensity by Trauma/General Dream

Dream	Mean CI	SD	t	p level
Trauma	1.74	1.04	5.46	< .001 (for one-tailed test)
General	.99	.89		

When CI emotions measured by the scale (fear, helplessness, anxiety, guilt, grief, despair, anger, disturbing, shame, disgust, power, awe, peace, happiness, hope, longing, relief, and love) were examined, a significant association was found for the 62

occurrences of helpless (p level less than .001), 12 occurrences of power (p level equal to .003), 7 occurrences of disgust (p level equal to .007), 67 occurrences of fear (p level equal to .01) and 12 occurrences of awe (p level equal to .02). No significant association was found for other emotions (see table 26). Disgust (100.0%, n=7), guilt (100.0%, n=3), despair (100.0%, n=1), power (91.7%, n=12), and awe (83.3%, n=12) were found in a higher percentage of trauma survivors dreams as compared to general dreams whereas a lower percentage of happy (35.7%, n=14), anger (36.4%, n=22) and disturbing (37.5%, n=8) were found in trauma survivors dreams than general dreams. Despite the low number of dreams with power, disgust and awe, when Fisher's Exact Tests were done to take this into account, the associations remained significant (.005, .01 and .03, consecutively).

Table 26. CI Emotion Association to Trauma Survivor

Emotion	% Trauma	% General	Chi-Square	p level	Phi coefficient
Helpless (n=62)	69.4	30.6	13.46	< .001	.26
Power (n=12)	91.7	8.3	8.87	.003*	.21
Disgust (n=7)	100.0	0.0	7.25	.007**	.19
Fear (n=67)	62.7	37.3	6.49	.01	.18
Awe (n=12)	83.3	16.7	5.67	.02***	.17
Guilt (n=3)	100.0	0.0	3.05	.08	.12
Anger (n=22)	36.4	63.6	1.84	.18	-.10
Happy (n=14)	35.7	64.3	1.23	.27	-.08
Despair (n=1)	100.0	0.0	1.01	.32	.07
Relief (n=6)	66.7	33.3	.69	.41	.06
Disturbing (n=8)	37.5	62.5	.52	.47	-.05
Shame (n=8)	37.5	62.5	.52	.47	-.05
Grief (n=15)	46.7	53.3	.07	.79	-.02
Anxious (n=22)	50.0	50.0	.00	1.0	.00
Love (n=6)	50.0	50.0	.00	1.0	.00
Peace (n=4)	50.0	50.0	.00	1.0	.00
Longing (n=2)	50.0	50.0	.00	1.0	.00

No "Hope" coded.

** Fisher's Exact Test = .005, ** Fisher's Exact Test = .01, *** Fisher's Exact Test = .03*

Negative (fear, helpless, anxiety, guilt, grief, despair, anger, disturbing, shame, and disgust), positive (power, awe, peace, happiness, hope, longing, relief, and love) and powerful negative (fear and helplessness) CI emotions were examined in the final step of this stage of the analysis of scale data. A significant association was found for all three categories of emotions. Powerful negative emotion had the strongest association with a p level of .001. Both positive and negative emotions had a high association as well with p levels of .03 (see table 27). General dreams had more positive emotions (60.9%) and less powerful negative emotions (35.4%) so that the percentage of trauma survivors' dreams with positive emotions (39.1%) was lower than general dreams and the percentage with powerful negative emotions (64.6%) was higher.

Table 27. CI Negative/Positive Emotion Association to Trauma Survivor

Emotion	% Trauma	% General	Chi-Square	p level	Phi coefficient
Powerful Negative (n=79)	64.6	35.4	11.07	.001	.24
Positive (n=64)	39.1	60.9	4.50	.03	-.15
Negative (n=136)	55.1	44.9	4.50	.03	.15

Coder Responses to Dreams

Data collected for the study were examined for association between the coder's reaction to the dream and whether or not the dreamer was a trauma survivor. The emotions (fear, helplessness, anxiety, guilt, grief, despair, anger, disturbing, shame, disgust, power, awe, peace, happiness, hope, longing, relief, and love) and the intensity of the emotions evoked in the coder upon reading the dream were tested. Positive (power, awe, peace, happiness, hope, longing, relief, and love), negative (fear, helpless, anxiety, guilt, grief, despair, anger, disturbing, shame, and disgust) and powerful negative (fear and helplessness) emotions evoked were looked at as well. It was found that each of these

emotion categories had a significant association. Powerful negative emotion had the strongest association with a p level of less than .001 and positive and negative emotions followed with p levels of .01 and .04, consecutively (see table 28). In contrast to CI emotions where the percentage of positive emotions was lower for trauma dreams than general dreams, all three coder evoked emotion categories, including positive emotions, were more prevalent in trauma survivors' dreams than general dreams with powerful negative emotions as the highest percentage (64.4%) for trauma survivors.

Table 28. Coder Negative/Positive Emotion Associated to Trauma

Emotion	% Trauma	% General	Chi-Square	p level	Phi coefficient
Powerful Negative (n=87)	64.4	35.6	12.71	< .001	.25
Positive (n=62)	62.9	37.1	5.98	.01	.17
Negative (n=165)	53.3	46.7	4.19	.04	.15

The individual emotions evoked in the coder were examined next. A significant association to trauma dreams was found for helpless (p level equal to .001), fear (p level equal to .003), awe (p level equal to .03), and guilt (p level equal to .04). Despite the low number of dreams with awe and guilt, when Fisher's Exact Tests were done to take this into account, the associations remained significant for awe (.04) and close to significant for guilt (.06). There was no significant association for the other individual emotions evoked in the coder (see table 29). Anger was the only emotion significantly associated to general dreams (p level equal to .03). The percentage of anger was higher for general dreams than trauma dreams (66.7%, n=36). The percentage of emotions reported for trauma survivors' dreams was generally high, with guilt and despair the highest (100.0%, n=4 and 2) followed by peace (83.3%, n=6) and awe (78.6, n=14).

Table 29. Coder Emotion Association to Trauma Survivor

Emotion	% Trauma	% General	Chi-Square	p level	Phi coefficient
Helpless (n=70)	65.7	34.3	10.64	.001	.23
Fear (n=72)	63.9	36.1	8.68	.003	.21
Awe (n=14)	78.6	21.4	4.92	.03*	.16
Anger (n=36)	33.3	66.7	4.88	.03	-.16
Guilt (n=4)	100.0	0.0	4.08	.04**	.14
Power (n=13)	76.9	23.1	4.03	.05	.14
Disgust (n=14)	71.4	28.6	2.77	.10	.12
Peace (n=6)	83.3	16.7	2.75	.10	.12
Despair (n=2)	100.0	0.0	2.02	.16	.10
Relief (n=14)	64.3	35.4	1.23	.27	.08
Hope (n=14)	64.3	35.7	1.23	.27	.08
Shame (n=25)	40.0	60.0	1.14	.29	-.08
Love (n=6)	66.7	33.3	.69	.41	.06
Longing (n=6)	66.7	33.3	.69	.41	.06
Anxious (n=51)	45.1	54.9	.66	.42	-.06
Grief (n=16)	56.2	43.8	.27	.60	.04
Disturbing (n=7)	42.9	57.1	.15	.70	-.03
Happy (n=19)	47.4	52.6	.06	.81	-.02

** Fisher's Exact Test = .04, ** Fisher's Exact Test = .06 (for one-tailed test)*

A t-test was done to determine how likely it was that the dreams that evoked the most intensity were from trauma survivors. Intensity scores of dreams from trauma survivors' had much higher scores (M = 3.64) than general dreams (M = 2.50) indicating that trauma dreams evoked much more intensity in the coder than general dreams (see table 30). The result was statistically significant ($t(198) = 6.68$, $p < .001$ for one-tailed test).

Table 30. Intensity Evoked by Trauma/General Dream

Dream	Mean CI	SD	t	p level
Trauma	3.64	1.34	6.68	< .001 (for one-tailed test)
General	2.50	1.06		

Coders' scoring for whether they thought the dream was from a trauma survivor or contained trauma material was looked at next. Dreams with trauma material were those where a traumatic event occurred in the dream (based on DSM IV's definition). A significant association was found both for dreams coded as from trauma survivors (p level less than .001) and as having trauma events (p level equal to .007). Both categories also had higher percentages for trauma survivors (80.2% and 67.4% consecutively). Coders determined that 46 dreams contained trauma events. Of these, 31 (67.4%) were from trauma survivors. They also predicted that 91 dreams were from trauma survivors and of these, 73 (80.2%) were from trauma survivors. This means that the coders were able to predict trauma dreams 73% (73 predicted from 100 total dreams) of the time and that the occurrence of trauma in dreams also predicts dreams as being from trauma survivors 31% (31 predicted from 100 total dreams) of the time (See table 31).

Table 31. Coder Determined Trauma Association to Trauma Survivor

	% Trauma	% General	Chi-Square	p level	Phi coefficient
Survivor (n=91)	80.2	19.8	60.99	< .001	-.55
*Trauma event (n=46)	67.4	32.6	7.23	.007	-.19

* Based on DSM IV definition of trauma event

Associations by Trauma Type

Finally, dreams were tested to determine whether there was a statistically significant association between dream content and trauma type. Comparisons were made between the dreams of survivors of human designed traumas, such as terrorism and personal assault, and not human designed, such as life threatening illness and car accidents. Statistically significant associations were found for five dream content categories. This is an area that has not been studied previously as far as could be found in the literature.

Of those dream categories with significant associations, only success (90.9%) and the contextualized image (CI) emotion awe (80%) were more prevalent for survivors of trauma not of human design. Success was also the most statistically significant association with a p level of less than .01 (p level equal to .004). The association of trauma not of human design to the CI emotion awe was also significant (p level equal to .04). It is interesting to note that both categories with association to survivors of traumas not of human design, success and awe, were positive whereas the categories with significance for survivors of human made trauma (helplessness, disgust and traumatic events in dreams) were negative (see table 32).

Of the categories with association to trauma of human design, the emotion helplessness as it was evoked in the coder when the dream was read was statistically significant (p level equal to .02). Sixty-three percent of the dreams with this coding were survivors of human made trauma. Sixty-seven percent of the dreams containing trauma events (such as a terrorist attack or gang war) were also from survivors of human made trauma. The association was statistically significant with a p level of less than .05 (p level equal to .02). Eighty percent of dreams evoking the emotion of disgust when read were from trauma survivors of human design. This was also a significant association (p level equal to .04). Despite the low number of dreams with success, coder disgust and CI awe, when Fisher's Exact Tests were done to take this into account, the associations remained significant (.008, .04 and .04, consecutively). There was no significant association for the other dream content categories (see table 32).

Table 32. Dream Content Association to Trauma Type

Category	% Human Design	% Not Human Design	Chi-Square	p level	Phi coefficient
Success (n=11)	9.1	90.9	8.27	.004*	-.29
Coder Helpless (n=46)	63.0	37.0	5.80	.02	.24
Dream trauma (n=31)	67.7	32.3	5.66	.02	.24
Coder Disgust (n=10)	80.0	20.0	4.00	.04**	.20
CI Awe (n=10)	20.0	80.0	4.00	.04***	-.20

** Fisher's Exact Test = .008*

*** Fisher's Exact Test = .04 (for one-tailed test)*

**** Fisher's Exact Test = .04 (for one-tailed test)*

Qualitative Dream Data

Statistically significant associations were found between dream content and 1) trauma versus general dreams and 2) human made trauma survivors' dreams versus non human made trauma survivors' dreams. Qualitative data was used to give examples of dreams in the categories where significant quantitative associations were found. These examples are based on the coding systems utilized. The narrative examples provided should help to explain and support the quantitative results obtained and triangulate the findings from the quantitative analysis. Categories with significant associations between dream content data and trauma versus general dreams will be examined first.

Hall/Van de Castle Scale – Sexuality, Danger and Attack

The significant associations for the data coded with this scale are summarized below (see table 33).

Table 33. Hall/Van de Castle Coding Association to Trauma Survivor

Category	% Trauma	% General	Chi-Square	p level	Phi Coefficient
Sexuality (n=14)	92.9	7.1	11.06	.001*	.24
Danger (n=57)	68.4	31.6	10.82	.001	.23
Attack (n=24)	70.8	29.2	4.74	.03**	.15

** Fisher's Exact Test = .001, ** Fisher's Exact Test = .04*

Sexuality. Sexuality and danger had the strongest associations although sexuality was relatively rare with only 14 dreams coded with this type of interaction. Here is an excerpt from a trauma dream (from a survivor of the World Trade Center terrorist attack) coded with sexuality:

> I dreamed of being in my office at a new job and I was naked. A man in a nurse's uniform was outside and he was watching me. I was then outside and the nurse started touching me and I told him to stop. He thought because I was naked that he could sexually assault me. His name was John…

This dream was coded for sexuality because the nurse sexually caressed the dreamer. This dream interaction may be a reflection of feeling vulnerable and invaded as a result of the attack. Here is another dream excerpt that was coded because of sexual thoughts:

> Working at a chemistry lab table. Sitting on a toilet. New co-worker came up. He had his child (toddler) with him. Put her on the counter next to me. Was showing me a camera but he was really trying to take a picture of my crotch. I could see what he was trying to do and tried to cover myself and move away…

The sexual interactions coded using this scale include 1) having or attempting to have sexual intercourse, 2) sexual caresses, 3) sexual kisses, 4) sexual overtures and 5) sexual thoughts. This was coded for sexual thoughts because the dreamer thought the co-worker was trying to take a picture of her crotch. This dream from a trauma survivor could indicate a trauma response where the dreamer recreated an invasive and traumatic sexual interaction in her dream as a way of trying to make sense out of her own real life trauma, the World Trade Center terrorist attack.

It is clear from these examples, and from others in the study as well, that much of the sexuality contained in the study trauma dreams was invasive and

unwanted. Here are 2 additional trauma dreams with sexual content that demonstrate this:

She was being masturbated by a witch with a long broomstick.

This one line dream and the next are both from survivors of sexual abuse. The sex in both is not only invasive and unwanted but also disturbing. The image of being masturbated by a witch is both scary in itself and also reminiscent of childhood when thoughts of witches were more common and were often linked with fears of the dark and nightmares. The following dream is disturbing as it reflects inappropriate and unsafe boundaries in a "dream" family where the adults have sex in front of the dreamer, their child, and then blame her for being upset about it thus demonstrating the kind of self-blame and criticism that many trauma survivors experience:

> Dreamed living with dad and his wife…and I was trying to find some privacy and every room I went to they were trying to have sex. I got more and more upset until it happened again. I went into the living room and sat on the couch mad. He came to me and was very patronizing. He says this must have triggered some voyeuristic impulse in you. I got mad and thought why is he making this my fault when I am upset because he fucked with me when I was young.

Danger. These trauma dreams also have an element of danger to them because the sexual advances were invasive and not wanted, but most were not coded for danger because it was not clear from the dream narrative that the dreamer was in danger. There are many other trauma dreams with much clearer examples of danger. Here is a cancer patient's nightmare where the danger was from a terrifying black bird:

> A mean, vicious, black bird, like a raven, is picking at me with its beak. It has enormous wings and terrible eyes. I am very afraid. I know there will be nothing left of me once he's finished picking, just bones and a skeleton.

It was almost as if the dreamer felt like she was being annihilated as she lost all control and was completely taken over by an other, the bird, which was intent on destroying her. She was completely helpless and seemed to have lost any volition to live. She did not fight the bird but was rather overwhelmed by her fear. Besides expressing her fear of the danger of cancer, the bird in the dream could also metaphorically represent her cancer "eating her up" until there is nothing left of her.

The following dream excerpt from a sexual abuse survivor is also terrifying and contains danger even though there was no attack and no one was hurt:

> I am a mermaid in a pond, sitting on a rock. The rock is partly in the water so that my legs are in the water. There is music and a narrator is saying something like "your prince charming is coming, sometimes it comes in the form of a big fish.' Just then a big fish swims by me, brushing my leg. It has big teeth. As it comes by again I see it is a fucking shark. I get scared. Then there is water all around and I want to leave…

This was coded as danger because the dreamer communicates the danger she feels by describing her fear. It is also generally understood that sharks are dangerous. This dream contained the feeling that the dreamer had lost control as well. There was the hint that she may have had some hope, "your prince charming is coming," but instead an agent of destruction, a shark, rubbed up against her leg in a erotic movement that may communicate this dreamer's loss of trust as a result of her trauma. She was enticed and then hurt, perhaps over and over again.

Other trauma dreams with danger, like these two from survivors of the World Trade Center terrorist attack, also have the same "loss of control" and being destroyed/ overwhelmed qualities about them:

> I am circling around in the air, flying above a mesa as if I am a bird. I am delighted by this and call to a friend to come and watch me. The friend is …applauding me and encouraging me in my flight. But, the shadow of an enormous plane passes over. Upon seeing the dark shadow and hearing the roar of its engine I am reminded of the WTC crash and begin to fall from the air with the ground spinning closer and closer. I woke up in terror.

> …the ground shook [and] I could see a fireball in the distance. Then about 10-15 meteors hit the island. One big one hit the campsite where my family was. I was yelling No! No! No! ...filled up with fear and pain. I ran as fast as I could to the area. The only thing left was a big ditch with black ashes all around. I was filled with sadness and pain. Then I woke up with fear and couldn't believe what I dreamed.

Attack. Besides the dream of the "mean, vicious, black bird, like a raven" mentioned above, where the dreamer is attacked as the bird picks at her with its beak, there are many other examples of trauma dreams where the dreamer is attacked, another dream content category with significant association to being a trauma survivor. In the dream from a survivor of firestorm below, a malevolent inanimate object, a fireball, attacked the dreamer's neighborhood with the apparent intent to destroy everything in its path:

> What I recall is an absolutely terrifying nightmare in which the fireball developed an organic consciousness. It was the embodiment of evil. It hid itself very well up on the hill in a pile of brush where it waited for all the fire departments to leave. Then it came back to get the houses it had missed. Somehow it had marked these houses with a fire seed and all it had to do was pass by the fire seeds for the house to ignite. I woke up screaming because I saw our "fire seed" begin to swell. In the dream, I was alone in the house.

The two dreams below, which involve attack, are also terrifying. The first is from a cancer patient and the second from a combat soldier. The fear in the second, from a survivor of human designed trauma, is even more pervasive than the first, from a survivor of trauma not of human design. It involves destruction and is much more globally threatening, leaving no avenue for escape. The first dream is also scary, as the attacking

snarling dog no doubt symbolically conveys unconscious thoughts that the cancer is attacking the dreamer in order to bite her and ultimately "eat her up:"

> The dreamer is attacked by a wild, snarling dog and she wakes up from the nightmare in terror.

> We are on a search and destroy and we finish up cleaning this village and we call for an airlift to get out. To my surprise we aren't going back to base camp as I thought we were. I realize something is wrong here. I could hear the major talking on the chopper. We are going someplace it is hot. There are a lot of NVA that hit a convoy (trucks, tanks, and APC's) and this was planned. They (us) are opening back up a big road that had been closed for about a year. When we land into this, I can smell death all around – flesh stench is overwhelming. We come under fire and we start returning fire. I can see that these people are not ordinary Charlie – they are NVA.

The attack in this next dream from the survivor of a serious motor vehicle accident may seem less scary because it was with darts, which are often associated with dart games, a form of play. Despite this, the dream was full of fear and it is clear that the dreamer felt out of control:

> …I can't see; I don't know anything…Darts are hitting me and sticking in me but I can't see to defend myself! I don't know where they are coming from!

This element of being "out of control" was repeated over and over in trauma dreams included in the study, signaling that attention and some kind of intervention were required to restore equilibrium and safety to the dreamers' subconscious.

Hartmann Scale – Contextualized Image Emotions and Intensities

The significant associations found for the Hartmann scale emotions contained in contextualized images in dreams are summarized below (see table 34). In addition to these CI emotions, CI intensity also had a statistically significant association (see table 25). Although fewer variables were coded utilizing this scale, there were more significant

associations than with the variables coded using the Hall/Van de Castle scale. One major difference between the scales is that dream content, including emotion, is only coded on the Hall/Van de Castle scale when the dreamer explicitly records it. Emotion is coded on the Hartmann scale when the coder identifies it as being contained in contextualized dream images.

Table 34. CI Emotion Significant Association to Trauma Survivor

Category	% Trauma	% General	Chi-Square	p level	Phi coefficient
Helpless (n=62)	69.4	30.6	13.46	< .001	.26
Power (n=12)	91.7	8.3	8.87	.003*	.21
Disgust (n=7)	100.0	0.0	7.25	.007**	.19
Fear (n=67)	62.7	37.3	6.49	.01	.18
Awe (n=12)	83.3	16.7	5.67	.02***	.17

** Fisher's Exact Test = .005, ** Fisher's Exact Test = .01, *** Fisher's Exact Test = .03*

CI helplessness. The CI emotion with the highest association to being a trauma survivor was helplessness. This was one of the many trauma dreams with helplessness coded from a contextualized image in the dream:

> Torturers!
> I am in a public building I think a hospital and I am shivering in terror. I am terrified, but I don't know why. I position myself on a couch lying down with my back against the wall for safety—People—a male and Janet promise they will not leave me alone, but they do. I notice people passing in the hall. I see the same blonde or white haired man pass by twice both times looking in my direction. He looks sullen and is in a white doctor's coat. The next scene I am being held down by a man who says he's going to cut my fingers off. First however we must dig a line around the fireplace in the brick (?) He is using something like a linoleum or woodcutter. I help because I think at least it will dull the blade but I can't imagine what its for—perhaps to drain the blood off the altar. In comes another man and gets my other arm and says he is going to cut those fingers off—he also has a small tool like a pizza wheel or dress marker. I am fighting and screaming but I don't seem to make much noise! Oh my God!

In this dream, which was from a survivor of the World Trade Center terrorist attack, the dreamer was abandoned by friends who had promised not to leave her alone. This feeling of abandonment is common among trauma survivors, particularly those who were hurt by humans rather than by a trauma not of human design like natural disaster. There is helplessness in the following dream, from another survivor of the World Trade Center terrorist attack, as well. Both dreams contain that experience of not being able to move or scream that often accompanies nightmares and extreme terror:

> I am sleeping in my bedroom and am pulled out of my sleep by two Afghani terrorists. They threaten to rape me. I am frozen in my bed and can hardly scream. As I awaken from my dream I can painfully feel a faint scream of terror rising from my throat.

This dream also demonstrates that a dream does not have to be long to contain immense emotion.

The following dreams also contain helplessness. The first, which contains the hope of the dreamer who knows another dream character will not die, is from a survivor of a severe motor vehicle accident. This is not considered a trauma of human design since it is rare that a driver purposely causes an accident, as is the case with the sexual abuse experienced by the second dreamer. The second dream clearly contains much more terror than the first, possibly reflecting the horror of being intentionally traumatized by another human being:

> …I hear water running—the shower. I walk to the bathroom and there are 2 white plastic tubs with wet clothes soaking and a young woman lying on the floor of the white tile shower with H20 running onto her and there is a faint tinge of pink (blood) swirling around her and in the water of the tubs. That is the only color in the room: that pale pink tinge and her long dark hair. She is as white as the tile; the life seems to be ebbing out of her. She barely opens her eyes and looks at me. "Can you help me," she pleads. She thinks she is going to die, but I know she is not. The/her bleeding has taken over her life. There is almost no life left in her—everything is pale.

> It is my 4 year old self and I am playing a flute in a field. There are swirls of colored light in which there are holes. The holes become mouths, the flute becomes a razor blade and I am unable to hold it. I am terrified.
> I am 18 years old. I am sweeping in a movie theater lobby. I look up and see a romantic movie poster. The swirls of light return again. The broom turns into a razor blade and I am unable to hold it. I am terrified.
> I am my present self. I see a popular actor. I cannot think of his name, but I know him at a very deep level. He takes me to his bedroom. He quickly undresses. I see the same movie poster from the movie theater lobby. It is now over the bed. The swirls of colored lights appear. The actor becomes demonic. He grabs me by the wrists and pulls me to the bed. I am terrified.

CI disgust. Interestingly enough, disgust also had a significant association for trauma survivors. Here are two examples of trauma dreams coded with CI disgust, the first from a cancer patient and the second from a survivor of sexual abuse:

> I am in the kitchen and I am cleaning up. But I see chicken legs sitting on the counter and refuse to clean them up. They are too gross.

> My family is staying in an old yucky cabin. It was left dirty by a former tenant. There is filth everywhere. I am the only one who notices. Even my brother pours me a cup of coffee in a filthy mug.

The second dream, besides being disgusting for the dreamer, also contained the element of denial so often present with trauma and in particular domestic violence like sexual abuse. Even though the cabin is clearly disgusting, no one but the dreamer seems to notice or at least to acknowledge the accumulation of filth. The denial in the dream could also be a reflection of the dreamer's own denial. This is an example of how dreams can highlight defense mechanisms used by the dreamer.

CI fear. CI Fear had a significant association as well. Here is an example of a trauma dream from a sexual abuse survivor that paints a very scary picture where not only was the dreamer scared and in danger, but no one would believe this was the case. This is often true with trauma survivors who are either told by family members that there

is nothing to worry about or ignored when they try to get help with family violence. Even with natural disasters, most people are not knowledgeable about the effects of trauma and can be dismissive of survivors' suffering without meaning to be:

> I am in a remote jungle like region. I am holding the hand of a 4 year-old girl. I know that a volcano is going to erupt but no one will believe me. I continue to warn people of the impending danger yet no one will believe me. I have to get to the top of the mountain, to the very edge of the volcano. It is very difficult to climb, the trail is steep and slippery. It is too hard for the little girl, so I have to put her on my back. There is a feeling of doom if I don't get to the top. It is so steep and difficult that I now have to crawl on my hands and knees, still carrying the child. At the top of the mountain, the volcano starts to blow...

The following trauma dream, from a cancer survivor and coded with fear, started out with a scary, out of control storm and ended with the vulnerability of a fallen bird's nest. The nest could symbolize a vulnerable part of the dreamer that she did not know how to heal after the trauma:

> There is a storm with a lot of wind. I watch anxiously as the sky darkens and tree branches scrape the windows. The lights go out, and I am very afraid. Later, after the storm is over, I go outside and find that a bird's nest has fallen to the ground. Two of the eggs have smashed, but the third one seems okay. I don't know what to do with it. If I touch the nest the mother bird many reject it, but I can't leave it lying on the ground…

This dream coded with fear is from the victim of a serious motor vehicle accident and demonstrates that horrific "out of control" feeling so prevalent in trauma dreams:

> Horrible nightmares of the damask curtain transforming to creatures like demons from Hell threatening me. I was so afraid I couldn't close my eyes with night after night of sheer terror!

CI power. Power, also with significant association to being a trauma survivor, is one of the two positive CI emotions that were more prevalent in dreams of trauma survivors. Here is a striking example from a cancer patient that seems to show her

recovery process, painful and difficult but empowering when she is able to feel the union and connection between herself and the beautiful white horse she is riding. This experience could be analogous to recovery from cancer and/or the ability to cope with treatments:

> A beautiful white horse galloped up to her and communicated that she should climb on its back. It took tremendous effort. She felt herself exerting every ounce of her strength to pull herself up by the horse's mane. When she was finally on his back, she felt herself and the horse become as one being as they galloped smoothly through a narrow opening between two huge rocks…

And here is a dream example that demonstrates another cancer patient's ability to take care of herself during a traumatic dream event. Often, survivors of traumas feel guilty for what they did not do to take care of themselves during the trauma event. In this case, the dreamer is able to save herself by escaping from a burning building in contrast to the helpless feeling that generally accompanies a response to trauma. Not only does she do this, but also she acknowledges her own power in the dream as she does it. This dream is also short:

> I'm escaping from a burning building and am amazed that I have the strength to climb down a rope. I wake up thinking, "I can do this!"

The empowerment of the cancer patient in this dream is particularly apparent. The dream is metaphorical as it describes her first "flying" under someone else's power and then on her own. This could represent needing help initially when recovering from the vulnerability of the trauma and then being strong enough to recover alone. Helpers could include friends, family, therapists and doctors:

> I am in a room with others - it appears to be a classroom. I want to fly. Somehow I ask to fly or there's some way that I know I can fly. First I fly by using someone else's power. And then I am ready to fly again on my own.

> Others don't believe that I'll be able to fly when I say that I'm going to do it on my own. I have a deep knowing that I will. I use thought and faith and concentration and fly from the front of the room to the back. It feels familiar - I have done this in other dreams (I feel this while I'm dreaming) It is a glorious feeling. I feel free and joyful and very much in my power. I feel very connected to myself and to Spirit while I'm flying. It is easeful and beautiful. I feel as if I'm dreaming and also witnessing my dream at the same time.

The empowerment is less apparent in this dream from a survivor of sexual abuse. She saves a little girl who jumps in a well but the dream is riddled with signs of her abuse. The reference to vagina and the vulnerability of the three little girls by the well seem to represent sexual abuse whereas the medicine and the dreamer's ability to save the girl seem more aligned with recovery:

> Sex abuse - There is some vagina medicine in the dresser drawer for three little girls. I am standing by the well also. One little girl jumps in and I save her.

CI awe. These dreams exhibit CI awe, the other positive emotion with significant association to trauma. Both dreams are very compelling. In the first, from a cancer patient, the dreamer seemed to have found that safe place so important after a trauma. The second, from a hospice patient, seems more spiritual in nature. Vibrant blue colors in dreams are often associated with spirituality. Healing from trauma requires a search for meaning by the survivor in order to make some sense of the trauma and why it occurred. This is sometimes accompanied by a spiritual search:

> I am being carried on the back of a large, powerful black bird. I feel cushioned and warmed, safe and protected, as I nestle down in the feathers. We are flying on a long journey. I am looking down on the countryside from a great height. The view is incredible. I feel as though I can see forever.

> There were several huge, deep blue boulders with eerie blue lights pulsating from them. They made a very loud wailing sound. All my attention was riveted right there…

This next dream coded with CI awe is from a survivor of sexual abuse. The analogy of being sent from the winter side of a bridge to the fall as she is being told she is okay seems to tell the story of her process of recovery from the "dark, dreary and cold winter" of the sexual abuse. Like the inner life of the sexual abuse survivor who often suffers alone from the "secret" of her abuse, winter is also an isolative time:

> I am standing on a bridge between winter and fall. He is on the winter side. He is telling me to return to the fall side and that I am okay. I awake sobbing.

CI intensity. Contextualized image (CI) intensity was the central focus of the Hartmann scale. It measured the intensity of the pictures imagined when reading the dream narrative. Dreams from trauma survivors were much more intense than general dreams (see table 25). This concept of CI intensity is easier to see with a dream example like this one from a survivor of the World Trade Center terrorist attack, which was coded with an intensity of 3, the highest intensity level on the scale:

> I am in this large room that appears to be on the top of the earth. I can see the slope of the earth and vast sections of the sky. The few fir trees in the distance look like miniatures. There are no other buildings. It is almost as if I am inside and outside at the same time because I can see the out of doors so clearly. One wall of the room is either open or made of glass. It is night-the sky is dark. The stars and the clouds seem to be rushing by. But I know that it is really the earth that is hurtling through space because the constellations of stars are changing rapidly and they are ones I've never seen before. There is a big screen television on the wall opposite the outdoors and I am standing near a phone. There may be another person at the far end of the room but we don't interact. Showing on the television is the same scene that that I see outside. The commentators are all gone from the studio and the feed from the camera is all that is on. I recall that earlier, when it was light outside, the television reported and showed three or five or more (its possible that the picture could not capture the extent of what was going on) airplanes in a row with their noses pointed into the

> earth. The "bad guys" had figured out a way to push the earth off course. The planes had revved up their engines and they were trying to push the earth out of its orbit. And, indeed, it worked. The earth is now hurling through outer space. I am on the phone trying to reach my family. We had been talking before but now the phone doesn't work and I can't get through to them. Instead, the phone is showing the same scene as is on TV and as I see out the window. I am terrified. I know it is the end of the world.

This dream narrative was very detailed and really brought the picture of the "end of the world" alive. It again demonstrates, as many of the trauma dreams presented have, how out of control the survivor felt. In addition, the dreamer was cut off from people she was close to, her family, also a common result of trauma. Despite the fact that contact with safe people is one of the things that helps heal the effects of trauma most, the fear and distrust engendered by trauma often cause survivors to isolate. One of the roles of therapy with trauma survivors is to reestablish that safe place and break the isolation as the therapist and survivor connect through the process of the work.

The following dream from a sexual abuse survivor is much less detailed and very short but also intense despite this (coded with an intensity of 3 as well) as it depicts a dreamer's brush with death. This is also an example of a dream that was coded with intense CI emotion but none on the Hall/Van de Castle scale because the Hall/Van de Castle scale only codes emotions explicitly recorded in the dream report and the dreamer recorded none. Not only did she record no emotions as she reported the dream but she seems removed from the process like a reporter watching the events unfold, possibly reflecting disassociation from the horror of being knifed and almost dying and/or numbing of affect:

> She dreamt of being knifed in the armpit, and saw herself being rushed to a hospital. She says, "I almost died, but I hung on for my boyfriend and

my sister."

Coder Responses to Dreams – Predicting Trauma, Evoked Emotions and Intensity

The significant associations for other data collected for the study are summarized below (see table 35). The other data collected includes emotions evoked in the coders as they read the dreams, the intensity of the emotion evoked, whether they think the dream is from a trauma survivor and if the dream contains a trauma event according to the DSM IV definition. In addition to the coder response categories with significant associations listed in table 35, trauma dreams also evoked much more intensity than general dreams (see table 30).

Table 35. Coder Response Significant Association to Trauma Survivor

Emotion	% Trauma	% General	Chi-Square	p level	Phi coefficient
Dream trauma (n=91)	80.2	19.8	60.99	< .001	-.55
Helpless (n=70)	65.7	34.3	10.64	.001	.23
Fear (n=72)	63.9	36.1	8.68	.003	.21
*Dream trauma event (n=46)	67.4	32.6	7.23	.007	-.19
Awe (n=14)	78.6	21.4	4.92	.03**	.16
Anger (n=36)	33.3	66.7	4.88	.03	-.16
Guilt (n=4)	100.0	0.0	4.08	.04***	.14

* Based on DSM IV definition of trauma event

** *Fisher's Exact Test = .04,* *** *Fisher's Exact Test = .06*

Coder response – evoked emotion intensity. Examples of intense emotion evoked in the coder when reading the dream include the dream below which also demonstrates a parallel between waking and dream life since it is from a dreamer who was traumatized by the World Trade Center terrorist attack. This dream was coded as a 7, the highest evoked intensity rating:

> Two nights after the event I dreamed I had a new job in the WTC. It was on one of the uppermost floors. I knew what was going to happen but for some reason could not tell the other people in the office, nor could I leave the building until I knew what date it was. I remember walking up to one

> of the glass walls and looking down to the ground, very, very far below. There were no calendars anywhere in the offices, nor did the computers have the date/time on their desktop. I kept running from office to office asking different people, "What is the date?" Everyone ignored the question, as though I had said nothing. Instead, they kept wanting to greet me and welcome me to the company. I was frantic to know the date, but no one would tell me. At some point in this horrible loop I woke up.

Coder response – trauma survivor's dream. Since many of the dreams that coders predicted as being from survivors also contained trauma events, it is likely that identifying trauma events in dreams was one of the ways predictions were made. The following dream from a patient in the final stages of terminal illness did not contain a trauma event, but it did contain what seemed to be a reference to end of life:

> She sees a candle lit on the windowsill of the hospital room and finds that the candle suddenly goes out. Fear and anxiety ensue as the darkness envelops her. Suddenly, the candle lights on the other side of the window and she awakens.

Since this was from a dreamer who had life threatening illness (a trauma survivor), this could also be another example of waking life (facing the possibility of death) paralleling dream life where the candle goes out (dies) and reappears on the other side of the window (in another realm).

Coder response – trauma event in dream. Forty-six dreams contained trauma events according to the DSM IV definition. Here are two examples. The first dreamer, a survivor of sexual abuse, witnessed terrible gangland violence and the second, from a survivor of the World Trade Center terrorist attack, was exposed to anthrax in a terrorist attack. There is again a certain parallel between the trauma experienced by the dreamer and what occurred in the dream. Both dreams also contained helplessness, terror, danger, and a feeling of being beyond help. In the second the dreamer was told that the attack was her fault for not paying attention to warnings. This is a typical trauma reaction that often

leads to self-blame, going back over what occurred and thinking, “why did I do this” or “if only I had done that instead:”

> I dreamt that I was a witness to terrible gangland violence. A vicious guy had another guy and was holding a large pair of industrial scissors up to him. She related this to Edward Scissorhand. He was backing away from the bad guy. Well they were both bad guys. And saying no, no, no. The vicious guy takes the scissors and puts one part inside his mouth and one outside and cuts back from the mouth to the jaw hinge. I watch and can’t do anything.
>
> I bring my arms to my face and blood pours out of my nose into my hands, I know I have been exposed to anthrax. I can't remember who or where but I think it is a terrorist who then tells me it is my own fault for being so stupid and going to the movies on that particular night and I was warned. I was terrified and felt helpless, it was one of those dreams you wake up from and it takes you a second to realize it was a dream.

Coder response – helplessness and fear. This dream, which was also from a patient at the end of her life, evoked both fear and helplessness in the coder. The dreamer was in a car that was out of control because it had no driver. When she called for help, not only did no one hear her but they also did not see her:

> She had been in a car, but it had no driver and it was going down a field that sloped steeply toward a large ditch that two men were digging. Some of her grandchildren and other children whom she knew were running and playing in the field. She kept calling out to them, only to realize that when they came near they just looked past her, showing no signs of recognition.

Both helpless and fearful emotions evoked in coders had significant associations to being a trauma survivor.

Coder response – anger. It makes sense that anger would be prevalent for trauma survivors. This was not found to be significantly true in their dreams except, like with this dream from a survivor of the World Trade Center terrorist attack, as the anger was evoked in the coder when the dream was read:

> I'm in Central Park. I see this tiny hot air balloon over us and I know

> something is wrong. It's coming closer. Then "boom" it explodes with lots of dust or smoke. Someone says its Anthrax. I cover my mouth. We all run to our cars. I get into a car with this sweet old couple. They are rich and will take me to their house. In the house, I scrub my hands and blow my nose. Their house is so nice. We hear Peter Jennings on the news. He says (and at the same time we see) Osama bin Laden walking across the park with a big gun and he declares war on the U.S. We are terrified-and the gas that was released is a part of our own Immuno Deficiency (? Like part of a disease we have here that he found some strand of and used it to make the Anthrax-like a strand from the AIDS virus). How he got a strand of that----we don't know. I think: Please God, I want to live. There are so many things I want to do. Life is so precious.

This one from a survivor of sexual abuse not only evoked anger but also seemed to contain anger for the dreamer who ends up attacking her attacker:

> I was parked in a remote area. Desolate. A guy came over to the car. He said he wanted drugs but I had a feeling he wanted sex, you know? He said, "You're right, I want sex." And then I knew he wanted to rape me. I said, "You know what I like?" in a very seductive voice. He said, "No, what?" "I like to sit on a hot -." (I said it in the dream but I can't say it to you.) He broke into a grin. And I opened my jacket, and pulled out my lighter, and held it under his penis until it glowed!!

Coder response – guilt. The dreams coded with guilt were all from trauma survivors. Here is a common example of what can happen to trauma survivors, particularly for those with life threatening illness who often wonder if they would have gotten sick if they had taken better care of their health. The dreamer, a cancer patient, seemed to be blaming herself for her own cancer worsening. Self-blame is a common effect of trauma that can also get in the way of healing. Instead of establishing the safety so paramount to recovery, self-blame can add to feeling vulnerable and insecure:

> She was neglecting her art and because of that neglect the cancer would get worse.

This dream from a survivor of a severe motor vehicle accident, which also contains guilt, seems more related to a human made trauma, demonstrating how the trauma event in waking life can be represented differently in dreams:

> I have "forgotten" my baby, now I'm trying to find it but I have shit all over me including my glasses so I can't see. I find it, it feels cool and I thump it in my hand (kind of a smack on its bottom), but I can't see anything. I don't know whether it's dead or alive. "They" come and take the baby away from me but I don't know if I'm 'guilty' of abusing it or it me! I can't see; I don't know anything. How could I have forgotten my baby…

Coder response – awe. Awe was a positive emotion evoked in coders as they read dreams that had a significant association to being a trauma survivor. Here is a dream with awe from a survivor of child abuse that seems to demonstrate healing from trauma. Not only does the dreamer live through a terrible storm, but she also comes out singing, "Joy to the World:"

> She dreamed of a huge tornado. And that tornado was a mother thing. Everybody was flattened from it. And she survived it. She came out at the end. She was singing joy to the world.

This dream from a cancer survivor, which evoked awe as well, expressed recovery in a different way as it communicated a sense of peace and connection that are generally difficult if not impossible for those in the throes of a trauma response:

> The dreamer and a beautiful big white dog are setting out together for a walk through lush forest. She feels companionship and a sense of adventure. She wakes with a sense of peace.

Associations by Trauma Type – Success, Emotions and Predict Trauma

The significant associations to the type of trauma experienced by the dreamer are summarized in table 32 (previously presented). The two trauma types are traumas of human design and traumas not of human design. Of the categories with significant

association, only success and the contextualized image (CI) emotion awe were more prevalent for survivors of trauma not of human design.

Success associated to survivors of trauma not of human design. Here are two examples of dreams from cancer patients, affected by trauma not of human design, that demonstrate the positive outcome of success:

> She is swimming underwater. She realizes that she is running out of air and feels terrified. She puts all her strength into one final breaststroke and just as she is about to pass out, she bursts through to the surface and sucks in a saving breath of air.
>
> I walked through a wall. It was easy. I just willed it so. I stood up against it; gently, very gently my body leaned into the wall, tentatively at first, then I applied light pressure with my body – and off to the other side I went.

Both dreamers made an effort that led to their success. One was an effort of will and the other was intense physical effort. In the first, she saves her own life by swimming to the surface while in the second she walks through a wall. They could both represent ascent from dissociation and unconsciousness as recovery occurs and "walls" of denial and fear are broken through. The following dream from a cancer patient seems to demonstrate success through mastery of the process of leading a workshop. Even though the dreamer does not know (is unconscious of) what she is supposed to present, she does so successfully and in a very natural way just as she may have become a "master" of taking care of her own health and safety related to the cancer:

> I am leading a workshop at some sort of conference in the area where I live. I think it is at the nearby recreation center at the city government where I used to work. I talk to M., the recreation director, just a couple minutes before it starts. I'm very nervous...I haven't planned anything for the workshop. I don't even clearly know what the topic is. M is vague about it. I just start and I ask people to ask questions and to talk about what they want to get out of the workshop. They ask questions and I facilitate - sometimes giving my thoughts and sometimes asking others in

> the audience. Someone in the audience throws money down --- it is as if it falls out of the sky. It's for one of the other participants. She (the person who the threw the money) wrote some thoughts on the money. It turns out not to be real money but still is exciting how it seems to fall from the sky.

This dream from a woman at the end of her life, which was also coded for success because the dreamer managed to get past a terrifying dragon and up a ladder with many dangerous obstacles, ends with her reaching a land of plenty that may represent life after death or heaven:

> I saw a ladder of tremendous height made of bronze, reaching all the way to the heavens, but it was so narrow that only one person could climb up at a time, To the sides of the ladder were attached all sorts of iron weapons; there were swords, spears, hooks, daggers, and spikes; so that if anyone tried to climb up carelessly or without paying attention, he would be mangled and his flesh would adhere to the weapons. At the foot of the ladder lay a dragon of enormous size, and it would attack those who tried to climb up and try to terrify them from doing so...Slowly, as though he were afraid of me, the dragon stuck his head out from underneath the ladder. Then, using it as my first step, I trod on his head and went up.
>
> Then I saw an immense garden, and in it a grey-haired man sat in shepherd's garb; tall he was, and milking sheep. And standing around him were many thousands of people clad in white garments. He raised his head, looked at me, and said: "l am glad you have come, my child." He called me over to him and gave me, as it were, a mouthful of the milk he was drawing; and I took it into my cupped hands and consumed it. And all those who stood around said: "Amen!" At the sound of this word I came to, with the taste of something sweet still in my mouth.

CI awe associated to survivors of trauma not of human design. Awe contained in dream contextualized images (CI's), the second dream content category with significant association to being a survivor of trauma not of human design was demonstrated in several examples of dreams previously provided for CI awe, both from survivors of trauma not of human design: the dreams of being carried on the back of a powerful black bird and of boulders with pulsating blue lights. These positive dreams not only demonstrate awe but also recovery from trauma and healing, as do the following

dreams. The first, from a hospice patient, is a spiritual dream that could also be showing her the way to her afterlife, thus preparing her for death and the second, from a cancer patient, is healing in a different way as it shows a new closeness with her father as a result of their forgiveness of each other. This process of reevaluating and working on past relationship problems is not uncommon in patients facing the possibility of death:

> They had flattened into steppingstones and had moved to make sort of a path and were singing sweetly like the gentle wind. In the distance was a soft, inviting, clear golden light. It was the Presence calling me.
>
> She had a "healing" dream in which she was with her father and both were reaching out to the other for forgiveness. In the dream they embraced, and she reported the sensations of that moment were "realer than real" and that she knew on waking that her whole past relationship with her father was changed.

Evoked helplessness associated to survivors of trauma of human design. The emotion helplessness evoked in the coder as the dream was read also had a statistically significant association to being a human made trauma survivor. Two dreams coded this way and previously presented as examples were from survivors of human made trauma. These were of torturers trying to cut the dreamer's fingers off and of terrorists threatening rape, both from victims of terrorism.

Evoked disgust associated to survivors of trauma of human design. Dreams evoking the emotion of disgust were also significantly associated to being a survivor of human designed trauma. One of the dream examples of disgust was from a survivor of human made trauma, sexual abuse. This was the dream of denial where the family seemed not to notice the filth they lived in although the dreamer did and was disgusted.

Trauma events in dreams associated to survivors of human designed trauma. Finally, there was a significant association between coders determining that trauma

events were contained in dreams, based on the DSM IV definition, and the dreamer being a survivor of human designed trauma. Both examples previously provided of dreams coded with trauma events, the dreams with terrible gangland violence and of an anthrax attack, were from survivors of human made trauma, sexual abuse and terrorism respectively.

Qualitative Analysis and Presentation of Data

Besides qualitatively using the dream narratives to demonstrate how quantitative coding was done, a separate analysis was done outside of the parameters of the quantitative analysis in an effort to access a greater depth of knowledge and allow study on a different level than possible with quantitative inquiry. To this end, a subset of 10 dreams was coded qualitatively. As key words, themes, questions, and categories began to emerge during the process of the analysis, qualitative coding brought structure and order to the data analyzed (Bogdan & Biklen, 1983). In general, qualitative "analysis involves working with data, organizing it, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned" (Bogdan & Biklen, 1983, p. 145) so that inferences and next stage plans can be made. The process was done as a part of this study both to help to explain and support quantitative findings and to add richness to the study results, potentially leading to new ideas and directions for research and practice.

Content analysis was utilized in an effort to uncover and identify recurring themes in the dreams. This analysis was inductive as it sought to discover hitherto unknown patterns but was deductive in that it will use a framework to guide the process. A sensitizing concept was used to orient the content analysis and to keep the process

focused. The focus of the content analysis thus paralleled that of the study. Dreams were examined within a framework of emotion. Inferred, depicted, and implied emotions were labeled and an attempt was made to make connections based on the themes found. This additional qualitative analysis process provided additional knowledge about the study data and thus increased its reliability.

The following categories of emotional themes were found in the ten trauma dreams qualitatively analyzed: 1) out of control – unstable, exposed, dependent, invaded, frustrated, overwhelmed, insecure; 2) in control – independent, powerful; 3) unconscious – confused, uncertain, inept, disconnected, in the dark, lifeless, dull; 4) conscious – confident, connected, spontaneous; 5) abandoned – scorned, disregarded, sullied, disrespected, and 6) nurtured – comfortable, playful, pampered. Two additional themes could be inferred from these. The unconscious themes could infer being shut down or dissociated and the abandoned themes could infer shame. The themes occurred with this frequency: out of control occurred 11 times, in control 2 times, unconscious 9 times, conscious 5 times, abandoned 6 times and nurtured 3 times. Clearly, the themes out of control and unconscious are dominating. The themes of abandonment, unconsciousness and of being out of control have already been noted as occurring frequently in the dream examples utilized to demonstrate the quantitative coding. This was true, for example, in the dream where the dreamer felt out of control because she could not see and darts were coming at her and hitting her. Here is another example of a dream where the dreamer, a survivor of the World Trade Center terrorist attack, is feeling **out of control**:

> Georgeanne and I are working at ToysRus. We are looking through magazines and a makeup box from Jake's Mom. We say something about $500 dollars worth. People start pouring into the store. "Stores' closed" I yell. I frantically search for the key to lock up as people shop.

The **unconscious/dissociated** theme found in the qualitative analysis of trauma dreams is demonstrated in dreams like this from a dreamer, a survivor of a serious motor vehicle accident, who could not see in the dream and said her arms were disconnected from her brain:

> I am playing tennis with Meg but to my horror I discover that my arms don't work like they used to. The left throws the ball up but it goes everywhere; worse though my right arm hitches ½ way thru the service swing and won't go above my head. I used to have a good serve, but my arms are not receiving the messages from my brain. Moreover I can't see when I move out on the court to play w/ Amelia who just arrived! All I can see is dog shit on the court, but if I look up I can't see. So I busily clean up the shit to cover that I can't see…

Besides depicting unconsciousness, there is clearly an element of loss of control in this dream as well, as there is in many of the trauma dreams. There were also many examples of dreams with unconsciousness in the dreams previously presented. Dreamers were disconnected or dissociated. When they spoke or cried for help no one heard them or they could not be seen. As a result of these kinds of dissociated experiences, trauma survivors often feel very isolated, alone and abandoned.

The following dreams, some of which have been previously presented, are examples of the other themes found as a result of the qualitative analysis. This one line dream heartbreakingly demonstrates **abandonment**:

I am aware that I am in a flat, a dark flat, with other abandoned children.

The darkness of the flat also shows the dreamer's unconsciousness and probable dissociation.

The dream previously presented where the woman flies, first on someone else's power and then on her own, demonstrates the theme of being **in control** since the

dreamer is able to succeed at flying independently after getting assistance with the process. This is also an excellent analogy of the trauma recovery process which requires reconnecting with safe people who help the survivor leave the often dissociated state of being traumatized and vulnerable, unable to fly on their own. It is also similar to the vulnerability of the eggs in the nest that fell out of a tree in the storm of one of the trauma dreams presented.

The above dream of flying also conveys **consciousness** in this excerpt which was previously presented:

> Others don't believe that I'll be able to fly when I say that I'm going to do it on my own. I have a deep knowing that I will. I use thought and faith and concentration and fly from the front of the room to the back. It feels familiar - I have done this in other dreams (l feel this while I'm dreaming). It is a glorious feeling. I feel free and joyful and very much in my power. I feel very connected to myself and to Spirit while I'm flying. It is easeful and beautiful' I feel as if I'm dreaming and also witnessing my dream at the same time.

Not only does the dreamer's description of her experience convey how present and conscious she was in the dream, but she also says that she is dreaming and witnessing the dream at the same time, making her doubly aware of her process. The playfulness and comfort of her flying process also convey **nurturance**, another dream theme found in the analysis. It is interesting to note that as with the examples of positive aspects of dreams quantitatively coded, these examples of qualitative themes also demonstrate recovery from trauma.

The themes uncovered in this analysis, particularly loss of control and unconsciousness, are themes that could be included in coding scales for future analysis of dreams. When they appear in dreams or otherwise come up in life, they can also be used

as signals for both trauma survivors and their therapists that trauma responses are occurring that require attention.

Chapter 6 – Summary of Findings, Implications and Conclusion

The dissertation will conclude with a presentation of a summary of study findings and a discussion of the implications of exploring the emotional content of dreams. Recommendations will also be made regarding directions for future research in this area. The feasibility of the study and its derivative benefits, upon completing the study and publishing the results, will also be explored as well as validity and reliability of the study and study limitations.

Summary of Findings

The study uncovered some interesting results including some new findings. The results fall into 4 areas: 1) findings related to content of trauma dreams versus general, 2) findings related to content of dreams from survivors of traumas of human design versus not of human design, 3) findings related to the two scales utilized and associated research, and 4) findings related to new dream content categories uncovered during qualitative analysis of the study of trauma dreams. In terms of the study hypotheses, the first three hypotheses were confirmed by the study results and the last two were not. The qualitative analysis and additional dream content quantitative data collected help explain why the fifth hypothesis was not confirmed.

In addition, the study results showed a higher frequency of negative emotions in the dreams overall as many previous studies have indicated. Utilizing the Hall/Van de Castle scale, 58.5% of the emotions were negative. The Hartmann scale found 68% of emotions to be negative. The percentage of negative emotions evoked in the coder was even higher at 82.5%. Each scale, however, does allow for coding of more negative

emotions than positive, which may be contributing to the higher percentages.

Hypotheses One and Two

The first study hypotheses were: 1) dreams of trauma survivors contain more emotions than dreams of non-trauma survivors and 2) dreams of trauma survivors contain more intense emotions than dreams of non-trauma survivors. It was found that both intensity and emotion were significantly characterized in trauma dreams. Both intensity and emotion were measured in four ways: 1) utilizing the Hartmann scale, 2) using the Hall/Van de Castle scale, 3) asking coders to quantitatively code their emotional responses to dreams after reading them and 4) through the qualitative analysis of dreams.

Not only was an association found for emotion and emotion intensity, but there was also a significant association for powerful negative emotion in general and these specific negative emotions: helplessness, fear, disgust, anger and guilt. These negative dream interactions had a significant association to being a trauma survivor as well: danger and attack. Several positive emotions had a significant association to being a trauma survivor. These were power and awe. Many of the dreams with power and awe also demonstrated recovery as shown in the dream examples previously presented. In addition, a positive interaction, sexuality, had significant association. However, qualitative analysis uncovered that for many of the sexual interactions in trauma dreams the sex was unwanted and invasive, indicating that whether the sex in a dream is negative or positive should be captured when dreams are coded.

Contextualized image (CI) intensity and emotions contained in CI's were significantly associated with trauma dreams when coded utilizing the Hartmann scale. Helplessness and power were the emotions with the strongest associations. Disgust, fear

and awe had significant associations as well. Powerful negative emotion also had both a higher frequency and a stronger association with trauma survivors.

There were categories on the Hall/Van de Castle scale that did have significant associations, such as sexuality, danger and attack, which make sense for trauma survivors particularly since at least some of the dreams with sexuality involved unwanted sexual advances. These are new findings that have not been previously published. However, there was no significant association found between being a trauma survivor and emotion, emotion intensity or negative emotions coded using this scale. This finding is probably related to the low incidence of emotions in dreamers' written dream reports since the literature reports that dreamers tend to record only about 25% of their dream emotions. The fact that interactions, such as danger and attack, that would be expected to evoke emotion in the dreamer did have a significant association to being a trauma survivor, supports the idea that trauma dreams do have more and more intense emotion.

There was a significant association to being a trauma survivor and evoked emotion and emotion intensity when coders were asked their emotional responses to the dreams. The specific emotions with a significant association were helplessness, fear, awe, anger and guilt. Coders were also asked whether they thought dreams were from trauma survivors and contained trauma events based on the DSM IV definition. There was a significant association to dreams with a trauma event and being a trauma survivor as well as to dreams the coder predicted were from trauma survivors. Coders determined that 46 dreams contained trauma events. Of these, 31 (67.4%) were from trauma survivors. They also predicted that 91 dreams were from trauma survivors and of these, 73 (80.2%) were from trauma survivors. This means that the coders were able to predict trauma dreams

73% (73 predicted from 100 total dreams) of the time and that the occurrence of trauma in dreams also predicts dreams as being from trauma survivors 31% (31 predicted from 100 total dreams) of the time. This also means that dream content can be used to predict whether a dreamer is a trauma survivor in two ways. The therapist's overall assessment of the dream is the best predictor of whether the dreamer was a trauma survivor. Whether the dream had a trauma event was a less powerful predictor. These findings related to coder response are also new findings not previously published in the literature.

The qualitative analysis uncovered six new emotion categories in the trauma dreams studied, two of which were most dominant and prevalent in trauma dreams: 1) out of control – unstable, exposed, dependent, invaded, frustrated, overwhelmed, insecure and 2) unconscious – confused, uncertain, inept, disconnected, in the dark, lifeless, dull. Many dreams either seemed out of control, contained events that were out of the dreamer's control or expressed the dreamer's loss of control in other ways. Unconsciousness was expressed as dissociation, disconnection, blindness and not being seen or heard. These dream categories existed in dreams that did not have emotions coded on the Hall/Van de Castle scale. The dream of the woman being knifed and almost dying, for instance, was qualitatively coded as being out of control but contained no recorded emotions that could be coded on this scale.

The qualitative dream examples provided also reinforce this finding. Not only were the trauma dreams emotional and intense, but many of them were also horrific nightmares which the coders avoided reading more than once because they were so profoundly painful. Examples of these include the dream of gangland violence in which the man's face is cut with a huge pair of scissors, the dreamer who is being threatened to

have her fingers cut off with an instrument like a circular pizza cutter, the woman who has a huge shark swimming by her and brushing against her leg, the dream of war when there was a smell of death all around and the dream of the malevolent fireball attacking the dreamer's neighborhood with the intent to destroy it.

Hypotheses Three and Four

The third and fourth study hypotheses were: 3) dreams of survivors of human designed traumas contain more emotions than survivors of traumas not of human design and 4) dreams of survivors of human designed traumas contain more intense emotions than survivors of traumas not of human design. There were significant associations found here as well. As expected, the dream content differed by trauma type. There were no significant differences in emotion intensity found but there were significant differences in individual emotions, confirming the third hypothesis but not the fourth. These are also new findings in an area that has not been studied before as far as could be found in the literature. Data were measured in four ways: 1) utilizing the Hartmann scale, 2) using the Hall/Van de Castle scale, 3) asking coders to quantitatively code their emotional responses to dreams after reading them and 4) through qualitative analysis of dreams.

Both human designed trauma survivors and survivors of trauma not of human design had significant associations to dream content. Dreams from human designed trauma survivors were more likely to contain the emotions helplessness and disgust. In addition, trauma events were more prevalent in dreams from survivors of human made trauma, such as war, child abuse and terrorism. Based on this, coders were able to predict that dreams were from trauma survivors more often if they were from survivors of human designed trauma than if they were from survivors of trauma not of human design, such as

natural disasters, severe automobile accidents and life threatening illness.

Dreams from survivors of traumas not of human design were more likely to contain the emotion awe. In addition, success was more prevalent in their dreams. Many of the dreams with awe and success also demonstrated recovery as shown in the dream examples previously presented. It is interesting to note that both success and awe are positive elements whereas the elements more prevalent for survivors of traumas of human design were more negative: helplessness, disgust, and trauma events. This makes sense since it has been found that the effects of human made trauma are much more severe and long lasting.

Success was the only significant association found utilizing the Hall/Van de Castle scale. CI awe was the only significant association found utilizing the Hartmann scale. The coder response had the most significant findings by trauma type. The emotions helplessness and disgust evoked in the coder when the dream was read were significantly related to the type of trauma experienced. Trauma events determined to exist in the dream by the coder were also significantly associated by trauma type. Qualitative analysis uncovered a higher degree of recovery in dreams from survivors not of human design. This included spiritual dreams and dreams with positive outcomes and growth experiences. This could point toward using dreams to determine the stage of recovery for trauma survivors, a finding that could have broad implications for clinical practitioners.

Fifth Hypothesis

The fifth study hypothesis was that using the Hartmann's and Hall/Van de Castle' scales to quantitatively code emotional content of dreams would obtain similar results. First of all, the findings have replicated Hartmann's, the researcher who has done the

most work in this area. In this study, as in his, there was a statistically significant association between being a trauma survivor and dream contextualized images (CI's). This finding supports his research results and the use of his scale for future research studies. Although Hartmann's scale is more subjective and less widely used than the Hall/Van de Castle scale, it is clearly important to dream and trauma research.

The association between being a trauma survivor and emotion and emotion intensity coded utilizing the Hall/Van de Castle scale was not found to be significant, disconfirming the fifth hypothesis. As the literature reports, the fact that there was no significant association found is no doubt at least in part due to the fact that most dreamers do not record emotion when they keep dream reports. Here is an example of an emotional dream (coded with a CI intensity level of 2) but with no emotions recorded:

> Phil had moved back in, again. He was uninvited. Back in the house doing trivial things and things I didn't like… making small almost unrecognizable designs on pages, spending all his energy on the inconsequential and ignoring me… us…, pretending to be a foreign professor and raking students over the coals thinking it was a lark, and yet I felt he was there to stay and maybe I had to surrender for my kid's sake and then I would be old and too vulnerable to make him leave...I would have to endure his insertion into my life. A loss of freedom and independence.

Two dreams previously discussed also recorded no emotion but also had high CI intensities. In the first the dreamer is knifed in the armpit and almost dies and in the second everything is flattened in a tornado that the dreamer survives. The other categories on the Hall/Van de Castle scale that did have significant associations were important findings. Although they do not contribute to confirming the fifth part of the hypothesis, they do indicate that there is emotion that is not being captured by this scale. Each of the significant categories found – danger, attack, sexuality and success – would normally

evoke some kind of emotion and yet one was not necessarily recorded. This points to the need to develop other ways, such as Hartmann's scale, to capture emotion in dreams. The qualitative categories found, in particular loss of control and unconsciousness, are emotional responses that could also be added to dream content scales.

Validity and Reliability

Janesick (1994) encourages triangulation as a means of creating more reliable study results. This is accomplished by approaching studies from a variety of directions rather than focusing on one aspect so that more opportunities for discovery are available (Janesick, 1994). Combining qualitative and quantitative methods is one avenue for achieving triangulation (Jick, 1983; Patton, 2002). Jick (1983, p. 145) talks about how "qualitative inquiry serves as glue that cements interpretation of multi method results." This is true because qualitative methods encourage intimate association with the phenomenon studied and focused awareness of data obtained. This study used both quantitative and qualitative methods. The intention of using this kind of triangulation was to obtain more valid and meaningful results thereby promoting a more grounded perception of the expression of emotions in dreams and how it differs for trauma survivors (Jick, 1983).

Critically, the quantitative investigation of the emotional content of dreams complemented the more complex data examined qualitatively. The qualitative aspect of the study brought the quantitative data alive and added meaning to its analysis as the dream narratives were interrogated from a different point of view, qualitatively. For example, utilizing a reliable scale to capture the number and kind of emotions expressed in trauma survivors' dreams (Domhoff, 2003) and comparing the results to those of non-

trauma survivors' dreams meant more with the use of the less focused and more in depth qualitative dream content data. The author expected the quantitative inquiry to find there were more emotions in trauma survivors' dreams but understood it might not because of other factors such as the accessibility or the complexity of the emotions. These were the realms of dreams that the author hoped to document through qualitative inquiry. Therefore, the use of both methods added to the richness and validity of the study.

Triangulation combined with reflexivity also increases objectivity thereby reducing the potential of subjectivity and bias on the reliability of the study (Patton, 2002). Triangulation also helps other aspects of reliability. It helped determine face validity for the quantitative scales utilized in the study. Emotions in dreams were accessed in four ways: the Hartmann scale, the Hall/Van de Castle scale, from coder responses and qualitatively. Since some of the results obtained were comparable, face validity for measures utilized was strengthened. The Hartmann scale, for instance, was strengthened because similar results were obtained from the coder responses. This increased the face validity of the Hartmann scale. Qualitative results also supported the validity of both scales and helped explain why the results found using the Hartmann scale were not comparable to those found using the Hall/Van de Castle scale.

Another aspect of reliability, predictive validity, was tested by the study. Its outcome supported past studies by Hartmann, who has found that trauma survivors' dreams contain more and more intense emotions than general dreams, indicating stability or re-test reliability. Content or construct validity was established as the studie's conceptual definitions were taken from the literature. Finally, empirical validity emerged as the hypotheses were tested and confirmed or disaffirmed.

Limitations of Study

The dearth of reported emotion in dream records was a limitation of this study, as was the lack of information about the individuals whose dreams were explored. Since dreamers tend to underreport the emotion in their dreams, it is likely that this study underreported emotion. Due to lack of information about the dreamers, it is also not possible to know whether the general dreams included some trauma survivors. None of the general dreams came from dreamers identified as trauma survivors but it is possible that some of them had a history of trauma, which could skew the study results.

The trajectory of the trauma experiences of the survivors in the study was also not demarcated for this study. No differentiation was made, for instance, between those diagnosed with the spectrum of trauma related illnesses, or those with a recent or distant trauma. In addition, with the secondary data being utilized for the study, it was not possible to determine stage of recovery for the survivors whose dreams were examined. Since it makes sense that survivors who are further along in the recovery process or who have no symptoms of the spectrum of trauma related illnesses may have dreams with emotional content similar to non-trauma survivors, the results may also have been skewed if there were many trauma survivors in recovery. Follow-up studies will be required to explore these limiting aspects of the study further.

Other identifying information was also not collected about the dreamers that could have an impact on the results of the study. Culture, race, socioeconomic status, and education are examples of identifying data that could influence how emotions are expressed and reported in dreams. Unfortunately, the secondary data collected does not contain this information. These are areas that need to be examined in future studies.

Of special note as a possible study limitation were potential barriers to obtaining an appropriate pool of dreams. First, since dreams cannot be accessed directly, investigators must rely on written reports of dreams. The accuracy of these reports varies based on dreamers' ability to retain details, how soon after waking reports are recorded, and individual differences in reporting methodologies. There was therefore a lack of standardization in the dream reports received. Despite this, the reports were as representational of dreams as reports of waking life experiences are. These waking life reports can also be similarly skewed (Kilroe, 2000). This method of dream content analysis has also been used extensively by dream researchers and researchers utilizing other narrative data and is considered an acceptable means of obtaining clinical data.

A second barrier is related to how representative the pool was, for example of trauma survivors in the population. Because the trauma dreams were not obtained from a heterogeneous sample and were not randomly selected, there is a possibility that the pool is not representative. Since the comparison group of general dreams is larger and more diverse, this pool of dreams is likely to be more representative. Despite this, issues related to validity based on the ability to generalize the results of the study may exist. Although this is an issue for the study, it less important than it would normally be because this is an exploratory study that is also testing a previously utilized method of coding emotions in dreams. Under these conditions, generalizability becomes less important and measurement validity and causal validity become more so.

These study limitations were primarily due to the use of secondary data analysis. Since the data was not collected with this study in mind, some relevant information about the dreamers is not available for study. The lack of standardized dream reports was also a

byproduct of this research approach. The noninvasive nature of data collection is an important feature of this approach that offsets these disadvantages. Since trauma survivors are a vulnerable population, the anonymity of the dreams and the fact that there was no direct contact with participants ensured their safety and protection.

In addition, there were limitations with some of the results obtained in the study. Although it was found with statistical significance that not only could it be predicted which dreams were from trauma survivors but that there were also statistically significant associations between dreams being from trauma survivors and containing trauma events, when Phi coefficients were calculated the strength of association was generally weak to moderate. The strongest association was for the coder's ability to predict trauma dreams (Phi = -.55). A moderate association was found (Phi = .24) when coders judged dreams to have trauma events (based on the DSM IV definition). These dreams were more likely to be from a survivor of human made trauma. The weakest association was found between dreams containing a trauma event and being from a trauma survivor (Phi = -.19).

An excellent percentage of agreement (90.6%) was achieved between the two independent coders utilized for the study. However, the percentage of agreement was lower for the Hartmann scale (69% overall and 73.3% for emotions). Also, it is a limitation of the study that after it was determined that the coders' agreement was high, only the data coded by the primary coder was input and statistically analyzed.

Finally, a study limitation is the small sample size of some of the dream element results, such as 14 occurrences of sexuality. Despite this, Fisher's Exact Test results were still significant in every case except coder-evoked guilt (.06). Also, since this is an

exploratory study, these preliminary findings are impressive and an important contribution to the social work profession.

Implications

This study was basic research that will contribute to the sparse knowledge on trauma dream emotions. It also has the potential to impact clinical practice. In the area of research, it will add to the knowledge of the scales utilized and provide information on modifying them to be even more useful in exploring dream emotions. It will also add credence to the previous research done by Hartmann and others who utilized his scale, since it replicated their findings. Finally, it will provide new information on the different ways trauma survivors express emotions in dreams. Not only do trauma dreams convey emotions differently than general dreams, but the expression of emotions also varies for survivors of human designed trauma and survivors of traumas not of human design. This knowledge will aid researchers of dreams, emotions and trauma.

The impact of this research on clinical practice may be even more important since the incidence of trauma is increasing as the population ages and physical illness and impending death increase, returning war veterans cope with trauma related issues, domestic violence and sexual abuse of children rises, and terrorism like the World Trade Center attack becomes more prevalent. The movie *In the Valley of Elah* (Haggis, 2007) depicts horrific effects of combat induced trauma related mental illness that result in murder. In combat, a soldier is forced to run over a child in the road and never recovers from this and subsequent shocking war events that he experiences with his buddies, also traumatized. They lose the ability to regulate their emotions and control their aggressive impulses resulting in a terribly sad ending that impacted them all. Similarly, many in

society still feel the effects of the World Trade Center attack and no longer see this country as a safe place immune to terrorism. Awareness of trauma is increasing as a result and new practice approaches are needed. Findings from this study have the potential to address this.

Basic Research Implications

The findings utilizing the Hall/Van de Castle and Hartmann scales were quite different for emotions, with no significant results related to emotions from the Hall/Van de Castle scale. Another measure used in the study looked at the emotions evoked in the coder upon reading dreams. The results from this scale were similar to Hartmann's. This included finding significant associations between trauma and emotion/emotion intensity utilizing both scales. The replication of these findings with two separate measures supports both the validity of the dissertation findings and prior research by Hartmann and others.

According to the literature, dreamers do not generally record their emotions in dream reports, the only avenue for coding emotion using the Hall/Van de Castle scale. This is an area that warrants investigation. There are several ways that this issue can be dealt with. One way is that dreamers can be specifically asked to record their emotions. The literature states that this practice has increased the incidence of emotions recorded. The scale can also be modified to capture emotion in other ways, for example looking at other related variables, or researchers can choose to use more than one scale to capture emotions as was done for this study.

The dream categories uncovered in the qualitative analysis could be useful as the scales are looked at for new ways to access emotion. Two themes were particularly

prevalent in this analysis: loss of control and unconsciousness. These are the two sides of the coin in terms of emotion, the first an avalanche of emotion that overwhelms and the second, a denial, repression or dissociation of emotion that numbs. It would be important to capture these aspects of emotion when examining dreams.

An examination of the dream content scales could also be warranted related to coding negative emotions. The results finding a higher frequency of negative emotions overall and more powerful negative emotions for trauma survivors as a group may, at least in part, be due to the fact that the scales utilized allow for reporting more negative emotions than positive. Hartmann's scale contains 8 positive emotions and 10 negative and Hall/Van de Castle's contains 1 positive and 4 negative. It is also true that the Hall/Van de Castle scale definition for confusion includes amazement, awe, astonishment and surprise, all of which can be positive emotions. Despite this, it is considered a negative emotion. Here is a dream example that was coded for confusion because it contained amazement but did not seem negative:

> I am caught between sheer cliffs. I throw a rope up and around a rock and begin to pull myself up. I am amazed at the feeling of strength and determination.

Therefore, it is possible that the results may be skewed by how the emotions are defined and by the unequal number of positive and negative emotions included in the scales. Further study, including an examination of the coding definitions, may work toward developing scales that more accurately reflect emotions in dreams. In the process, a larger number of positive emotions may be captured. At this point it is not clear that there are actually more negative emotions or if the results were caused by scale design.

Examination of how the Hall/Van de Castle scale codes sexuality is also warranted since many of the occurrences in this study were of negative and unwanted sexual experiences. It makes sense that this is an aspect of sexuality that should also be captured by the scale since sexuality is often thought of as a positive experience. Without a positive/negative indicator of sexuality on the scale, its results could be misleading.

Finally, the new findings from this study are important to future research. The fact that although the Hall/Van de Castle scale did not produce significant results related to emotion but did in relation to other dream elements captured by the scale warrants further investigation. Further research into how success, misfortunes, like danger, and social interactions, like being attacked and sexuality, interconnect with emotions is needed to understand why the dreams of trauma survivors differed in these areas despite the fact that their recorded dreams did not report significantly different emotions than general dreams using this scale.

Further study is also needed to understand more about how the responses to trauma differ for those affected by human designed events and those affected by events not of human design. This is an area that has been mentioned in the literature, with the DSM IV even stating that human designed trauma is more long lasting and serious, however no research was found in the literature supporting this related to dreaming, despite the fact that nightmares are a symptom of PTSD. The results from this study not only support this idea but also point to strengths in the dreams of survivors of traumas not of human design that it is important to research and understand on a deeper level.

Clinical Practice Implications

The qualitative portion of this study was in some ways more related to practice then the quantitative even though the quantitative results will inform practice. The triangulation of using two quantitative scales and both quantitative and qualitative approaches provided information that would not have been obtained otherwise by showing what was actually in the dreams, much of which was not captured quantitatively. Besides providing the new categories for dream emotions previously mentioned, this methodology also uncovered many positive aspects of trauma dreams, many of which seem to indicate recovery and/or resilience.

Since survivors of traumas not of human design experience more success in their dreams which also contain more CI's with the positive emotion awe, it makes sense to look at why survivors of human made trauma experience less of these. It is possible that this reflects more resilience in survivors of trauma not of human design. Human made trauma has been found to have a more severe and long lasting effect and is often talked about less by survivors than traumas not of human design. Individuals with life threatening illness are given much more support than returning war veterans, whose suffering is often secret and experienced alone if the veteran is even in touch with it at all. There was more helplessness in the dreams of survivors of human made traumas which would make sense even if this type of trauma did not have a more severe effect because there is so much more isolation and so much less support.

These factors support the need to find new ways to address the suffering trauma survivors often experience. With the illusion of safety society generally believes in shattered by trauma, survivors learn to live by drawing on what are often harmful defense

mechanisms. These defense mechanisms can promote isolation, disconnection and life without access to safe emotions. The inability to regulate and tolerate emotion is such a large part of the effect of trauma that many have fought for PTSD to be categorized in the DSM as an illness of emotion regulation. Most trauma survivors have some difficulty with their emotions, with many becoming overwhelmed by them or responding by becoming numb or disconnected. Many fluctuate between emotion overload and dissociation. Flashbacks of the trauma event or associated emotions also plague many survivors. Nightmares, like the horrific examples in this dissertation, can be a form of flashback as well so that there is no escape even during sleep from the emotions evoked by the trauma event. These symptoms and the defense mechanisms required to cope with them take tremendous energy that could be used for more useful purposes if recovery and healing were achieved.

The aftermath of trauma is not only dangerous emotionally but also relationally and physically. Trust is often broken by trauma and even though connection with safe people heals more than anything else, relationships can be very difficult for survivors, disrupting family life and leading to marital difficulties. Some become recluses, others never really talk about what they are experiencing or block it out so they are not able to relate to the world as whole persons. Work relationships are affected so that the human toll from trauma also extends to employment issues and the inability to effectively participate in a work environment. A holistic approach to trauma is needed not only to address this but also the health issues that can ensue. It has been found that many trauma survivors are not good at taking care of their physical health and they can also suffer from

the physical effects of the stress from the trauma, leading to compromised immune systems and stress related disorders such as high blood pressure.

It has been found that in order to recover, trauma survivors need to find ways to restore their psychic balance. This can entail the need to re-form, into a single consciousness, a self that has been fragmented and dissociated by unbearable trauma emotions. Dreams can help with this process since the process of dreaming itself has been found to increase positive affect as emotional housecleaning calms during sleep. Writing down the dreams can help further. One practitioner who provided dreams for this study shared how a survivor of sexual abuse she worked with woke up regularly to gruesome dreams. She would get up, write down the dreams and staple them together to bring to her therapist and discuss. This process was for her a way of containing and holding at bay the horror of the dreams till they could be brought out in order to find some resolution in the safe place of therapy. Even without the outlet of therapy, this technique can be helpful to trauma survivors as it provides a way to get the dreams out and on paper where they can be looked at with some distance or disposed of. The support of a therapist can make this process even more healing.

Unfortunately, many therapists do not feel comfortable working with dreams. Horrific nightmares can be even more daunting. Even experienced trauma therapists frequently avoid working with dreams because they cannot bear the pain they engender. Others are afraid that they will not know what to do with the dream once it is introduced in therapy. Some are understandably nervous about anything that might trigger the patient. The therapist of a patient in the psychiatric unit of a hospital went so far as to tell

hospital staff that she could not work with the patient's trauma issues as an outpatient because the patient became suicidal.

Addressing this need for more information about how to work with dreams, training on dreamwork could be provided as a part of higher education coursework, for instance by teaching it as a component of classes on trauma or end of life issues. It could also be provided during post degree programs for credentialing, continuing education or specialty certification credit. Besides specific guidance on how to help clients work with dreams and cope with nightmares, it would be important to address how and when to intervene with dreams. This would include a way to distinguish trauma dreams and nightmares from general ones.

In order to work with trauma survivors effectively and help them with the disabling symptoms of emotional imbalance, nightmares and flashbacks, therapists also need training in how to create a safe place when working with trauma survivors. The prevalence of fear in trauma survivors' dreams points toward the importance of this need to find ways to help survivors and their therapists to establish safety. Teaching self care and stress management are examples of how therapists can help patients in this area, holistically working with their trauma issues. Building relationship skills, including effective boundary setting and communication, can also increase confidence and work toward developing healthy trust.

The prevalence of success in the dreams of survivors of trauma not of human design, dreams that also seem from the qualitative research to contain more recovery and/or resilience, indicates that utilizing empowerment techniques when working with survivors of human made trauma could be healing as it helps them to recognize and

create success in their daily lives. Cognitive behavioral techniques that help trauma survivors focus not only on the negative in their lives but also the positive, such as the positive emotion of awe also experienced more in the dreams of survivors of traumas not of human design, could also be helpful. In addition, cognitive behavioral techniques could help trauma survivors learn to work with their emotions, developing greater emotional intelligence, less impulsivity and a more balanced perspective.

Trauma survivors can also use the imagery from dreams with positive emotions as a coping tool. In the author's clinical practice, members of a cancer support dream group used an image from one member's dream to help them through treatments, when waiting for test results and during other difficult periods in the trajectory of their illness and recovery. The dreamer of this dream felt its nurturance and healing so profoundly and communicated it with such power that it helped not only her but also the entire group. This was the dream:

> She wakes up in bed with a tiger asleep with its head on her stomach. At first, she is afraid when she realizes how powerful it is, then she knows that it is safe and marvels in its presence – how soft its fur is, how beautiful its coloring, how heavy it feels on her stomach. It feels like a healing presence. As she comes fully awake and comfortable with the tiger being there, it gets up and walks away.

Disgust and guilt are also areas that could be looked at further. The author has found, in her own clinical work and also in colleagues' work, that it is not unusual for trauma survivors to gag as they discuss trauma events or feelings. This could be due to disgust, an emotion that can be felt internally rather than for the abuser, adding to the symptom of self-blame that is so common in trauma survivors and could lead to guilt. Dreams can be a safe way to access these emotions and all the dream categories

previously mentioned as prevalent for trauma survivors. Working with them indirectly and in a safe way could promote healing.

It is true that for some trauma survivors directly working with dreams is not an option. For those who have no effective coping skills and/or whose nightmares are so terrible that working with them is impossible, dreamwork can be not only difficult but can also trigger a harmful trauma response. Despite this, there are many ways therapists can be trained to use dreams in their work with trauma survivors. One avenue for such training is sleep hygiene. Nightmares and dreams with intense emotion need to be addressed not only because they signal something that needs attention but also because they disturb sleep and create stress. Learning sleep hygiene techniques, like avoiding scary movies or heavy meals prior to going to bed, can improve sleep and reduce nightmare interruptions. Pre-sleep coping and relaxation can also help reduce stress and the chance of nightmares. Finally, dream incubation can be taught. This is a technique whereby individuals can utilize visualization to "ask" for the type of dreams they want. The author has done this extensively with trauma survivors who were usually so scared of their nightmares that when given a choice, they "asked" for no dreams rather than happy ones. Most reported good results after using this technique and felt empowered as a result.

Another way therapists can use dreams is by listening to their messages. Even when they are not shared in detail, dreams carry information that can be used. Nightmares and intense emotions in dreams indicate that something needs to be addressed. The author talked with a trauma survivor who had done much recovery work and had not had nightmares for years as a result and then began to have them again. The onset of

nightmares is generally a good sign that something has triggered a trauma response. It became clear in talking to this survivor that her response had occurred as a result of serious health issues that had required several major surgeries in the last year. As soon as this came to the surface, she was able to address the trauma response directly and felt much better almost immediately.

In this case, the survivor was able to do dreamwork as well. This was the dream she reported, a recurring one she was having currently and also had as a child:

> I'm in a big cavernous building with high walls and I am running. Running from someone – monsters or something else very scary. Every time I go down a hall I think, "this is the one" and then when I get closer I see it is the same as the others, with still no way out.

When survivors can do dreamwork, trauma emotions can be accessed in indirect ways that do not trigger the trauma, allowing their expression so that they can be released. Even without discussing the details of this dream, the dreamer was able to express hopelessness, guilt, and fear once she saw the connection between the nightmares and her health issues. This is one way therapists can help survivors make connections through their dreams, enabling effective processing of trauma memories that cause flashbacks and nightmares. The dream also clearly shows her hopelessness and fear, allowing even closer inspection of these emotions. Until they were uncovered in this discussion, these potentially harmful unconscious emotions could not be worked on and released, thus promoting healing and recovery and freeing up energy previously utilized to repress and avoid them.

It is clear from the dreamwork reported above and from the dream where the dreamer awoke to find a tiger lying on her, that the context of the dream for the dreamer is very important information. The dream with the tiger could be seen as terrifying

without knowing the powerful nurturing context for the dreamer, since tigers are generally considered dangerous. Dreams of being chased are common and often just depict anxiety. Realizing that this one, of running down one hallway after another looking for an avenue for escape, was a trauma response only came about because of the dreamer's contextual information. Therefore, what the dream means to the dreamer is often much more important than any interpretation a therapist can make. This is something that therapists need to know. Much of the hesitation to work with dreams is due to therapists' lack of knowledge related to interpreting dreams when in actuality therapists' interpretations are not needed to use dreams in their work with clients.

Since dreams reflect waking life, as was seen in this study where trauma survivors had more trauma events in their dreams, they can also provide other types of information for therapists to work with. It makes sense that therapists could use dreams to help predict that a patient is a trauma survivor and even possibly their stage of recovery. In this study, coders were able to predict which dreams were from trauma survivors and there were more trauma events in the dreams of survivors of human made trauma, another way dreams could aid prediction. Like the dream shared above, where the dreamer could find no way out, dreams can signal therapists that work needs to be done. Nightmares and dreams with highly charged emotions are good examples of this.

Dreams provide other messages as well. Since many of the examples of sexuality found in this study involved unwanted sexual advances, this is an area that could be utilized in therapy. Therapists may need to watch for signs of aggressive sex in their trauma patients' dreams and in their waking lives in order to help them to recognize and appropriately cope with it. Therapists can also vary their interventions depending on the

type of trauma experienced since differences were found in dreams by trauma type as well. Although survivors of traumas not of human design often do have more support and more positive dreams than many affected by traumas of human design there is an area that many report difficulties with. The author's clinical work involved working with cancer and hospice patients who complained that many friends and family members did not know what to say to them about their illness. Even therapists have had difficulty talking about death as evidenced by the instance of cancer support group leaders who never even mentioned the death of a group member in the group discussion. Dreams provide a means for patients to talk about illness and death indirectly and therapeutically. Not only was this found to be healing in the author's work, but studies have also shown that this kind of sharing is beneficial.

A contribution of this dissertation, that can aid in determining interventions and also serve as a research tool, is the delineation of trauma events as either of human design or not. The definition utilized by the study, which was devised based on DSM IV criteria, found significant differences between the dream experiences of each, supporting the premise that human designed trauma is more harmful to individuals and suggesting validity of the study's delineation approach. This is a methodology that can be utilized by practitioners when determining appropriate practice interventions.

Additionally, dreamwork can have a direct relational advantage. Talking about dreams is a way to establish an alliance and create connection, safely. It is both intimate but also removed, like describing a favorite movie or discussing an engrossing book. It is well known that the connection with the therapist is crucial in therapy and for trauma survivors whose trust is often broken, this aspect of therapy is even more important.

Working with dreams can be quasi therapeutic as it creates bonds and encourages trust to build. For all these reasons, training in dreamwork is essential for therapists working with trauma survivors and could also be beneficial for therapists in general.

Conclusion

The results of this study are formative, as they inform practice about the use of dreamwork with trauma survivors. They pave the way for summative studies that would allow for generalization beyond the study to other types of trauma survivors. Since the content of trauma survivors' dreams has been identified as different from non-trauma survivors, with further study it may be possible to generalize this finding to others, thus adding to the practice knowledge on trauma, dreams, and emotions. The study may also add incentive to use dreams as a therapeutic treatment for trauma and the spectrum of trauma related mental illnesses. Dreams tend to be a means of expressing trauma memories and emotions, as indicated by the inclusion of nightmares as one of the criteria for PTSD. Trauma survivors, for example, frequently experience nightmares and are afraid of their dreams, often losing sleep as a result and thus adding to their stress levels. A greater understanding of the dream process and an ability to encounter and work with the emotional content of dreams would be beneficial to both therapists and trauma survivors.

Increasing understanding about dreams is important because despite a high incidence of trauma, especially among the mentally ill, both therapists and patients often have difficulty discussing trauma directly, to the point of often avoiding the topic altogether (Belicki & Cuddy, 1996; Goelitz, 2001b). Trauma stories can be overwhelming for both therapist and patient and can scare therapists who are unsure

about how to work with them in a safe way (King & Sheehan, 1996). Working with dreams can be a safe way to access the material indirectly. The slight distance from the trauma material provided by dreams can make accessing the material easier for both therapist and patient. In a study with cancer patients this was found to be so true that patients found themselves talking about the possibility of dying and expressing emotions when talking about their dreams, despite the fact that they had insisted they did not want counseling. This indirect access to the trauma allowed them to express painful emotions previously inaccessible (Goelitz, 2001a, 2001b). This is true because dreams contain the dissociated affect and memories, so that accessing them can be a way to reclaim this material and heal (Kalsched, 1996).

Since the purpose of this study was to learn more about the emotions clients express in dreams in order to ultimately gain crucial information regarding the therapeutic role of dreamwork and its link to recovery from the effects of trauma, it is hoped and anticipated that this first stage exploratory effort will produce many new and potentially conflicting ideas about the subject. The trends that emerged from the data analysis will bring more structure and order to an understudied area so that inferences and next stage plans can be made. This project will be the beginning of a larger effort that will add to the knowledge base on emotions in dreams and trauma recovery, thus providing crucial direction for further study. Some examples of future studies include 1) repeating the study using men's dreams rather than women's in order to see if and how the results differ, 2) continuing the study using only trauma survivors with PTSD, and 3) continuing the study using trauma survivors both with and without PTSD. Examples one and two would allow for more context then was available with this study by including the

diagnosis of PTSD. Stage of recovery is another contextual piece of data that could be looked at in future studies. Cultural influences would also be important to look at. Any of these studies would contribute to the knowledge base on trauma, emotion and dreams as they generate new ideas and encourage future research.

Appendix

Dream Coding Sheet

Dream Coding Sheet

1. Dream ID# _____

2. Emotions explicitly stated in dream report? Please check all that apply:

Emotion(s) explicitly stated in dream report?	Emotion(s) intense based on explicitly stated dream descriptors that are moderate or forceful?
☐ Anger – such as annoyed, irritated, mad, provoked, furious, enraged, belligerent, incensed, or indignant	☐ Moderate descriptor like "some" or "a little" ☐ Forceful descriptor like "very" or "a lot"
☐ Happiness – such as contented, pleased, relieved, amused, cheerful, glad, relaxed, gratified, gay, wonderful, elated, joyful, or exhilarated	☐ Moderate descriptor like "some" or "a little" ☐ Forceful descriptor like "very" or "a lot"
☐ Sadness – such as disappointed, distressed, hurt, depressed, lonely, lost, miserable, hopeless, crushed, or heartbroken (references to physical pain or physical distress not included)	☐ Moderate descriptor like "some" or "a little" ☐ Forceful descriptor like "very" or "a lot"
☐ Apprehension – such as terrified, horrified, frightened, scared, worried, nervous, concerned, panicky, alarmed, uneasy, upset, remorseful, sorry, apologetic, regretful, or ashamed	☐ Moderate descriptor like "some" or "a little" ☐ Forceful descriptor like "very" or "a lot"
☐ Confusion – such as surprised, astonished, amazed, awestruck, mystified, puzzled, perplexed, strange, bewildered, doubtful, conflicted, undecided, or uncertain	☐ Moderate descriptor like "some" or "a little" ☐ Forceful descriptor like "very" or "a lot"

3. Aggressive interactions explicitly stated in dream report? Please check all that apply:

☐ Hostile thoughts – feeling of hostility or anger with no overt aggressive expression	☐ Dire verbal threats – aggressive act in which a serious accusation or verbal threat of harm is made
☐ Critical remarks – aggression expressed or verbalized such as by yelling, swearing, criticizing or scowling	☐ Stealing or destruction of possessions – theft or intentional destruction of possessions
☐ Rejections and refusals – rejecting, exploiting, controlling, or verbally coercing (may be expressed as dismissals, demands, refusals, disobedience, or any other negative or deceitful behavior)	☐ Being chased – being chased, captured, confined, or physically coerced into performing some act ☐ Being attacked - attempting to physically harm including threatening with a weapon ☐ Murder – aggressive act which results in death

4. Friendly interactions explicitly stated in dream report? Please check all that apply:

☐ Friendly thoughts – feeling of friendliness not expressed overtly

☐ Friendly remarks – friendliness expressed or verbalized such as by welcoming, greeting, waving, introducing a person to another, smiling, phoning or writing, sympathizing with or praising

☐ Gifts and loans – offering a gift or loaning a possession

☐ Offers of help – extending or offering assistance

☐ Invitations and visits – taking initiative in requesting to share a pleasant social activity

☐ Physical affection – like shaking hands, cuddling baby, dancing, or nonsexual kissing and embracing

☐ Romance – desire for long-term relationship including getting married/engaged, or falling in love

5. Sexual interactions explicitly stated in dream report? Please check all that apply:

☐ Sexual intercourse – having or attempting to have sexual intercourse

☐ Sexual caresses – non-intercourse activities often preceding intercourse including masturbation

☐ Sexual kisses – necking and "nonplatonic" kissing

☐ Sexual overtures – sexual overtures or "propositions"

☐ Sexual thoughts – sexual thoughts or fantasies

6. Success and failure explicitly stated in dream report? Please check all that apply:

☐ Success – after expending some energy and perseverance in pursuit of goal, eventually managing to achieve it

☐ Failure – after expending some energy and perseverance in pursuit of goal, failing to achieve it due to personal limitations and inadequacies

7. Fortune and misfortune explicitly stated in dream report? Please check all that apply:

☐ Fortune – acquisition of goods or beneficial occurrence that is completely adventitious or out of the control of recipient including a bountiful environment or being "lucky"

☐ Death – death as a result of accident, illness or some unknown cause

☐ Injury or illness – includes pain, operations, bodily or mental defects, insanity, amnesia, or blindness (plastic surgery not included because elective surgery)

☐ Accident – accident without physical or mental injury; loss of or damage to or defective possession

☐ Danger – threatened by something in the environment

☐ Falling – falling or in danger of falling

☐ Obstructed – environmental barrier or obstacle including frustrating situations such as being late, if character did not intentionally contribute to difficulty

8. Is there a contextualizing image(s) (CI) in the dream? ☐ Yes ☐ No

CI's are descriptions in the dream report that evoke very real pictures of what is occurring in the dream. "Tornadoes dark and menacing" and "driving too close to edge" are examples of CI's.

First CI (maximum of 2, 45 characters each): _

_ _

CI intensity on a scale of 0-3:

No CI "about as striking and powerful an image as you've seen"

☐ 0 ☐ .5 ☐ 1 ☐ 1.5 ☐ 2 ☐ 2.5 ☐ 3.0

Examples: "driving too close to edge" was coded as "1," "tornadoes dark and menacing" was coded as "2.5"

Emotion(s) in CI – please check maximum of two if they apply:

☐ Fear, terror	☐ Anger, frustration	
☐ Helplessness, vulnerability, being trapped, being immobilized	☐ Disturbing – cognitive dissonance, disorientation, weirdness	☐ Peace, restfulness
☐ Anxiety, vigilance	☐ Shame, inadequacy	☐ Happiness, joy, excitement
☐ Guilt	☐ Disgust, repulsion	☐ Hope
☐ Grief, loss, sadness, abandonment, disappointment	☐ Power, mastery, supremacy	☐ Longing
☐ Despair, hopelessness (giving up)	☐ Awe, wonder, mystery	☐ Relief, safety
		☐ Love (relationship)

Is there a second contextualizing image(s) (CI) in the dream? ☐ Yes ☐ No

Second CI (maximum of 2, 45 characters each): _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _

CI intensity on a scale of 0-3:

No CI "about as striking and powerful an image as you've seen"

☐ 0 ☐ .5 ☐ 1 ☐ 1.5 ☐ 2 ☐ 2.5 ☐ 3.0

Emotion(s) in CI – please check maximum of two if they apply:

☐ Fear, terror	☐ Anger, frustration	
☐ Helplessness, vulnerability, being trapped, being immobilized	☐ Disturbing – cognitive dissonance, disorientation, weirdness	☐ Peace, restfulness
☐ Anxiety, vigilance	☐ Shame, inadequacy	☐ Happiness, joy, excitement
☐ Guilt	☐ Disgust, repulsion	☐ Hope
☐ Grief, loss, sadness, abandonment, disappointment	☐ Power, mastery, supremacy	☐ Longing
☐ Despair, hopelessness (giving up)	☐ Awe, wonder, mystery	☐ Relief, safety
		☐ Love (relationship)

9. Emotion(s) evoked in you by dream? Please check all that apply:

☐ Fear, terror	☐ Anger, frustration	☐ Peace, restfulness
☐ Helplessness, vulnerability, being trapped, being immobilized	☐ Disturbing – cognitive dissonance, disorientation, weirdness	☐ Happiness, joy, excitement
☐ Anxiety, vigilance	☐ Shame, inadequacy	☐ Hope
☐ Guilt	☐ Disgust, repulsion	☐ Longing
☐ Grief, loss, sadness, abandonment, disappointment	☐ Power, mastery, supremacy	☐ Relief, safety
☐ Despair, hopelessness (giving up)	☐ Awe, wonder, mystery	☐ Love (relationship)

Emotion(s) evoked intense? Please check one:

Highest intensity overall Lowest intensity overall

☐ 7 ☐ 6 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1

10. Do you think dreamer is a trauma survivor? ☐ Y ☐ N

How likely is it that dreamer is a trauma survivor? Please check one:

Very Likely Not Likely

☐ 7 ☐ 6 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1

Chief investigator only – Do you remember this dream? ☐ Y ☐ N

11. Based on DSM IV, is there a traumatic event in dream? ☐ Y ☐ N

DSM IV: Traumatic events that are experienced directly include, but are not limited to, military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, natural or manmade disasters, severe automobile accidents, or being diagnosed with a life-threatening illness. For children, sexually traumatic events may include developmentally inappropriate sexual experiences without threatened or actual violence or injury.

1. Dream ID# _____

Dream Coding Sheet Instructions

Coding Sheet Instructions with a Coding Example

Step 1: Read the dream report. See sample dream below. Coding of the sample dream follows, step by step.

ID# 14
I was in the gas station where I work about 34 hours a week, and instead of half of all the employees being there for one shift there was the whole total present which only served to heighten the confusion. Cars were piling in from every direction and stopping in the middle of the drive and blocking traffic as they often do. No one was directing them to proper positions so that they could be serviced, so I was trying vainly to establish some order. The situation grew worse and worse, and each attendant seemed to feel that he was working all by himself with no thought of teamwork. The new boss who was there was just walking around giving out simple useless orders and making the situation worse. As the confusion grew, I became more irritated and the dream faded.

Step 2: Enter the Dream ID# on the Coding Sheet

1.	Dream ID# ____14_____

Step 3: Complete part 2 of the coding sheet, indicating emotions explicitly stated in dream report and whether descriptors are used that show intensity. Emotions can be experienced by any dream character including animals in the dream but must be stated as emotions in order to be coded. If it is not clear whether emotions are explicitly stated or whether they have an intensity descriptor, do not code them. Definitions of emotions follow:

"Happiness" – All the words that describe a general state of pleasant feeling tone are included in this class. Some of the terms that would be coded as happiness are: contented, pleased, relieved, amused, cheerful, glad, relaxed, gratified, gay, wonderful, elated, joyful, and exhilarated.

"Anger" – Representative of some of the terms coded under anger are: annoyed, irritated, mad, provoked, furious, enraged, belligerent, incensed, and indignant. As with the following emotional classes, all degrees of intensity are included within each class, and no coding distinction is made between weak expressions of anger such as being peeved or strong expressions such as being infuriated.

"Sadness" – All the words that describe an unhappy emotional state are coded in the sadness class. References to physical pain or physical distress are not included in any of the emotional classes. Some examples of terms that would be coded as sadness are: disappointed, distressed, hurt, depressed, lonely, lost, miserable, hopeless, crushed, and heartbroken.

"Apprehension" – The emotions included in this class can be considered related to fear, anxiety, guilt, and embarrassment. Although differences are recognizable among them, all these conditions lead to conscious concern on the part of the person experiencing them. The person feels apprehensive about the

possibility of physical injury or punishment, or the possibility of social ridicule or rejection. Thus the common denominator underlying these emotions is that the person is uncomfortable because the threat of some potential danger exists. The following terms, which are not meant to be all inclusive, refer to various degrees of apprehension: terrified, horrified, frightened, scared, worried, nervous, concerned, panicky, alarmed, uneasy, upset, remorseful, sorry, apologetic, regretful, and ashamed.

"Confusion" – Confusion is generally produced either through confrontation with some unexpected event or else through inability to choose between available alternatives. Some words that may indicate confusion are: surprised, astonished, amazed, awestruck, mystified, puzzled, perplexed, strange, bewildered, doubtful, conflicted, undecided, and uncertain.

Emotion(s) intense based on dream descriptors? Where emotions are described in dreams utilizing intense adjectives, such as "very," the emotions will be coded "Yes, forceful descriptor" and where the descriptors are diminutive, such as "a little," they will be coded "Yes, moderate descriptor."

2. Emotions explicitly stated in dream report? Please check all that apply:

Emotion(s) explicitly stated in dream report?	Emotion(s) intense based on explicitly stated dream descriptors that are moderate or forceful?
√ Anger – such as annoyed, irritated, mad, provoked, furious, enraged, belligerent, incensed, or indignant	☐ Moderate descriptor like "some" or "a little" √ Forceful descriptor like "very" or "a lot"
☐ Happiness – such as contented, pleased, relieved, amused, cheerful, glad, relaxed, gratified, gay, wonderful, elated, joyful, or exhilarated	☐ Moderate descriptor like "some" or "a little" ☐ Forceful descriptor like "very" or "a lot"
☐ Sadness – such as disappointed, distressed, hurt, depressed, lonely, lost, miserable, hopeless, crushed, or heartbroken (references to physical pain or physical distress not included)	☐ Moderate descriptor like "some" or "a little" ☐ Forceful descriptor like "very" or "a lot"
☐ Apprehension – such as terrified, horrified, frightened, scared, worried, nervous, concerned, panicky, alarmed, uneasy, upset, remorseful, sorry, apologetic, regretful, or ashamed	☐ Moderate descriptor like "some" or "a little" ☐ Forceful descriptor like "very" or "a lot"
√ Confusion – such as surprised, astonished, amazed, awestruck, mystified, puzzled, perplexed, strange, bewildered, doubtful, conflicted, undecided, or uncertain	☐ Moderate descriptor like "some" or "a little" √ Forceful descriptor like "very" or "a lot"

Step 4: Complete part 3 of the coding sheet, indicating aggressive interactions explicitly stated in dream report. Aggressive interactions can be between any dream characters including animals, but must be clearly stated in order to be coded. If it is not clear whether aggressive interactions are explicitly stated, do not code them.

Definitions of aggressive interactions follow:

1) Hostile thoughts – "Covert feeling of hostility or anger without any overt expression of aggression."

2) Critical remarks – "Aggression displayed through verbal or expressive activity. Included are such activities as one character yelling or swearing at another or when a character criticizes or scowls at another.

3) Rejections and refusals – "This subclass covers all situations where there is an attempt by one character to reject, exploit, control, or verbally coerce another character. Such activity may be expressed through dismissals, demands, refusals, disobedience, or any other type of negativistic or deceitful behavior."

4) Dire verbal threats – "An aggressive act in which a serious accusation or verbal threat of harm is made against a character."

5) Stealing or destruction of possessions – "An aggressive act which involves the theft or destruction of possessions belonging to a character."

6) Being chased – "An aggressive act which involves a character being chased, captured, confined, or physically coerced into performing some act."

7) Being attacked – "An aggressive act which involves an attempt to physically harm a character. The attempt may be carried out through personal assault or through use of a weapon. Threatening a character with a weapon is also included in this subclass."

8) Murder – "An aggressive act which results in the death of a character."

3. Aggressive interactions explicitly stated in dream report? Please check all that apply:

☐ Hostile thoughts – feeling of hostility or anger with no overt aggressive expression	☐ Dire verbal threats – aggressive act in which a serious accusation or verbal threat of harm is made
☐ Critical remarks – aggression expressed or verbalized such as by yelling, swearing, criticizing or scowling	☐ Stealing or destruction of possessions – theft or intentional destruction of possessions
☐ Rejections and refusals – rejecting, exploiting, controlling, or verbally coercing (may be expressed as dismissals, demands, refusals, disobedience, or any other negative or deceitful behavior)	☐ Being chased – being chased, captured, confined, or physically coerced into performing some act
	☐ Being attacked - attempting to physically harm including threatening with a weapon
	☐ Murder – aggressive act which results in death

Step 5: Complete part 4 of the coding sheet, indicating friendly interactions explicitly stated in dream report. Friendly interactions can be between any dream characters including animals, but must be clearly stated in order to be coded. If it is not clear whether friendly interactions are explicitly stated, do not code them.

Definitions of friendly interactions follow:

1) Friendly thoughts – "Friendliness is felt toward a character but it is not expressed overtly."

2) Friendly remarks – "This subclass covers a wide variety of expressions of friendliness that may be conveyed through either verbal or gestural means. Included are such activities as welcoming, greeting, waving hello or goodbye, introducing one person to another person, smiling at someone, phoning or writing someone for a friendly purpose, and sympathizing with or praising someone."

3) Gifts and loans – "Friendliness expressed by offering a gift or loaning a possession to a character."

4) Offers of help – "Friendliness expressed through extending assistance to a character or offering to do so. Included in this subclass are helping, protecting, and rescuing acts."

5) Invitations and visits – "Friendliness expressed by taking the initiative in requesting a character to share in a pleasant social activity. Included are situations where one character requests another to accompany him to some event, asks for a date, and visits someone. In the latter case, friendliness is coded because visiting implies someone is taking the initiative or an active role in furthering a relationship with another character. Simply associating with a character or jointly participating in an activity is not coded as a friendly act."

6) Physical affection – "Friendliness expressed through socially acceptable forms of physical contact. Included in this subclass are such acts as shaking hands, cuddling a baby, and dancing. Kissing and embracing are also included when they are clearly nonsexual in intent."

7) Romance – "Friendliness expressed through a desire for a long-term close relationship with a character. Included in this subclass are getting married, becoming engaged, and falling in love."

4. Friendly interactions explicitly stated in dream report? Please check all that apply:

☐ Friendly thoughts – feeling of friendliness not expressed overtly	☐ Offers of help – extending or offering assistance
☐ Friendly remarks – friendliness expressed or verbalized such as by welcoming, greeting, waving, introducing a person to another, smiling, phoning or writing, sympathizing with or praising	☐ Invitations and visits – taking initiative in requesting to share a pleasant social activity
☐ Gifts and loans – offering a gift or loaning a possession	☐ Physical affection – like shaking hands, cuddling baby, dancing, or nonsexual kissing and embracing
	☐ Romance – desire for long-term relationship including getting married/engaged, or falling in love

Step 6: Complete part 5 of the coding sheet, indicating sexual interactions explicitly stated in dream report. Sexual interactions can be between any dream characters including animals, but must be clearly stated in order to be coded. If it is not clear whether sexual interactions are explicitly stated, do not code them.

Definitions of sexual interactions follow:

1) Sexual intercourse – "A character has or attempts to have sexual intercourse with another character."

2) Sexual caresses – "This subclass involves the various types of non-intercourse activities often preceding intercourse. Included are handling another character's sex organs and related fondling and petting activities. Masturbation is also included in this category."

3) Sexual kisses – "This subclass covers necking and "nonplatonic" kissing. Kissing as a form of greeting, e.g., between family members, is coded under friendliness."

4) Sexual overtures – "A character makes sexual overtures to or "propositions" another character."

5) Sexual thoughts – "A character has sexual thoughts or fantasies about another character."

5. Sexual interactions explicitly stated in dream report? Please check all that apply:

☐ Sexual intercourse – having or attempting to have sexual intercourse	☐ Sexual kisses – necking and "nonplatonic" kissing
☐ Sexual caresses – non-intercourse activities often preceding intercourse including masturbation	☐ Sexual overtures – sexual overtures or "propositions"
	☐ Sexual thoughts – sexual thoughts or fantasies

Step 7: Complete part 6 of the coding sheet, indicating success and failure explicitly stated in dream report. Success and failure can be reported for any dream characters including animals, but must be clearly stated in order to be coded. If it is not clear whether success and failure are explicitly stated, do not code them.

Definitions for success and failure follow:

"Success" – In order for a success to be coded, the character must be described as expending some energy and perseverance in pursuit of his goal. The objective need not be of epic significance; a successful handling of some difficulty encountered in a character's daily life is sufficient to qualify. What is important is that the character is confronted by some problem, decides to deal with it, and then works at its solution before eventually managing to succeed.

"Failure" – In order for a failure to be coded, the character must be described as expending some energy and perseverance in pursuit of his goal. When a character is not able to achieve his or her desired goal because of personal limitations and inadequacies, a failure is coded.

6. Success and failure explicitly stated in dream report? Please check all that apply:

☐ Success – after expending some energy and perseverance in pursuit of goal, eventually managing to achieve it

√ Failure – after expending some energy and perseverance in pursuit of goal, failing to achieve it due to personal limitations and inadequacies

Step 8: Complete part 7 of the coding sheet, indicating fortune and misfortune explicitly stated in dream report. Fortune and misfortune can be reported for any dream characters including animals, but must be clearly stated in order to be coded. If it is not clear whether fortune and misfortune are explicitly stated, do not code them.

Definition for fortune follows:

"Fortune" – Fortune is coded when "something good" happens to a character. The "something good" is not the result of an *intentional* beneficial act by another character. That would be coded as friendliness. Neither is the "something good" the result of any purposeful striving by the character. That would be coded as success. A good fortune is coded when there is an acquisition of goods or something beneficial happens to a character that is completely adventitious or the result of a circumstance over which no one has control. A good fortune is also coded if the dreamer is in a bountiful environment. In a word, it might be said that a good fortune is coded whenever a character becomes "lucky."

Definitions for misfortune follow:

1) Death – "A character is dead or dies as a result of accident or illness or some unknown cause. Death because of murder is categorically excluded because it is coded as an aggression."

2) Injury or illness – "A character is injured or ill. This class includes pain, operations, any bodily or mental defects, insanity, amnesia, blindness, etc. Plastic surgery is not counted as an "operation" because it is elective surgery."

3) Accident – "A character is involved in an accident without suffering physical or mental injury; a character loses a possession or has one destroyed or damaged; a character has a defective possession."

4) In danger – "A character is threatened by something in the environment. A threat of falling is classified under the next heading."

5) Falling – "A character is falling or is in danger of falling."

6) Obstructed – "A character encounters an environmental barrier or obstacle: a character is unable to move: a character is lost; a character is late or is in danger of being late. This class of misfortunes includes situations which produce frustration for the character who confronts them. In some cases, the frustrating agent is clearly environmental in origin as when a road is washed out; in other cases, where the character is lost or late, it is possible that the character has made a contribution to the difficulty he or she encounters. However, since the character has not consciously or intentionally produced the difficulty and views the problem as external to himself or herself, it seems more appropriate to treat it as a misfortune that

bears upon the character, rather than as a failure in achievement or as an intropunitive aggression. Having encountered the obstacle which warrants the misfortune coding, it is possible for success or failure to be coded if the character makes an effort to overcome the barrier and the outcome is described in the dream report."

7. Fortune and misfortune explicitly stated in dream report? Please check all that apply:

☐ Fortune – acquisition of goods or beneficial occurrence that is completely adventitious or out of the control of recipient including a bountiful environment or being "lucky"	☐ Accident – accident without physical or mental injury; loss of or damage to or defective possession
☐ Death – death as a result of accident, illness or some unknown cause	☐ Danger – threatened by something in the environment
☐ Injury or illness – includes pain, operations, bodily or mental defects, insanity, amnesia, or blindness (plastic surgery not included because elective surgery)	☐ Falling – falling or in danger of falling
	√ Obstructed – environmental barrier or obstacle including frustrating situations such as being late, if character did not intentionally contribute to difficulty

Step 9: Complete part 8 of the coding sheet, indicating contextualizing images in the dreams and their intensity.

Contextualizing image(s) (CI) in dream? Contextualizing images are descriptions in the dream report that evoke very real pictures of what is occurring in the dream. The continuous variable "contextualizing image" is defined as:

> …a striking, arresting, or compelling image – not simply a story – but an image which stands out by virtue of being especially powerful, vivid, bizarre, or detailed.

CI's are broad images that denote a "scene" of the dream rather than one "picture" in a "scene." In the example below, for instance, "driving to close to the edge of the side railing" is a part of the image that also includes "the onramp is going in a clockwise direction" and "it's night time." Not all dreams have CI's. In order to be reported, the dream image(s) needs to evoke a very real picture and to have an impact either because of it's intensity, the level of detail, or by how weird, different or special it is.

Here are some examples of contextualizing images:
"driving too close to edge" from the dream:

> Getting on onramp in CO, new man in my life and I feel good
> I remember that it's night time, I'm in Colorado getting on an onramp, driving a little to close to the edge of the side railing, but I'm okay, There is a new man in my life somehow. I feel good, that's all I remember. The onramp in going in a clockwise direction.

"tornadoes dark and menacing" from the dream:

> I dreamed of tornadoes and they were dark and menacing. I went into a building with

another woman and we had to hold two glass doors shut against the force of the wind. We placed our backs against the doors as the tornado struck. The wind caused the glass to shatter and we had to pick shards off our backs (of glass). There were two double sets of glass doors here. One behind us and one in front of us.

"shark jumps out of the water" from the dream:

I am on a flat-topped barge or I am watching a man who stands on the deck of a flat-topped barge. A shark jumps out of the water and attacks him. It happens so fast that he has no chance to respond. He's rattled but manages to say, "The shark only raped me."

CI intensity on a scale of 0-3: Attributes for the variable "CI intensity" are 0, .5, 1, 1.5, 2, 2.5 or 3 with 0 representing no contextualizing image in dream and 3 representing "about as striking and powerful an image as you have seen." Here are some examples of emotional intensity coding from the dreams above: "driving too close to edge" would be coded as "1," "tornadoes dark and menacing" would be coded as "2.5" and "shark jumps out of the water" would be coded as "3."

Emotion(s) in contextualizing image: Here are some examples of emotion coding from the dreams above: "driving too close to edge" would be coded as "Fear, terror," "tornadoes dark and menacing" would be coded as "Helplessness, vulnerability, being trapped, being immobilized" and "shark jumps out of the water" would be coded as "Shame, inadequacy."

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8. Contextualizing image(s) (CI) in dream? ☑ Yes ☐ No

CI(s) (maximum 2, 45 characters each, use 2nd coding sheet if 2): Cars piling in from every direction

CI intensity on a scale of 0-3:

No CI "about as striking and powerful an image as you've seen"

☐ 0 ☑ .5 ☐ 1 ☐ 1.5 ☐ 2 ☐ 2.5 ☐ 3.0

Emotion(s) in CI – please check maximum of two if they apply:

☐ Fear, terror	☐ Anger, frustration	☐ Peace, restfulness
☑ Helplessness, vulnerability, being trapped, being immobilized	☐ Disturbing – cognitive dissonance, disorientation, weirdness	☐ Happiness, joy, excitement
☐ Anxiety, vigilance	☑ Shame, inadequacy	☐ Hope
☐ Guilt	☐ Disgust, repulsion	☐ Longing
☐ Grief, loss, sadness, abandonment, disappointment	☐ Power, mastery, supremacy	☐ Relief, safety
☐ Despair, hopelessness (giving up)	☐ Awe, wonder, mystery	☐ Love (relationship)

Step 10: Complete part 9 of the coding sheet, indicating the emotions evoked in you by the dream and their overall intensity.

9. Emotion(s) evoked in you by dream? Please check all that apply:

☐ Fear, terror	√ Anger, frustration	☐ Peace, restfulness
√ Helplessness, vulnerability, being trapped, being immobilized	☐ Disturbing – cognitive dissonance, disorientation, weirdness	☐ Happiness, joy, excitement
☐ Anxiety, vigilance	☐ Shame, inadequacy	☐ Hope
☐ Guilt	☐ Disgust, repulsion	☐ Longing
☐ Grief, loss, sadness, abandonment, disappointment	☐ Power, mastery, supremacy	☐ Relief, safety
☐ Despair, hopelessness (giving up)	☐ Awe, wonder, mystery	☐ Love (relationship)

Emotion(s) evoked intense? Please check one:

Highest Intensity overall ☐ 7 ☐ 6 ☐ 5 √ 4 ☐ 3 ☐ 2 ☐ 1 Lowest Intensity overall

Step 11: Complete part 10 of the coding sheet, indicating whether and how likely you think it is that the dreamer is a trauma survivor.

10. Do you think dreamer is a trauma survivor? ☐ Y ☑ N

How likely is it that dreamer is a trauma survivor? Please check one:

Very Likely ☐ 7 ☐ 6 ☐ 5 ☐ 4 ☐ 3 ☑ 2 ☐ 1 Not Likely

Chief investigator only – Do you remember this dream? ☐ Y ☑ N

Step 12: Complete part 11 of the coding sheet, indicating whether there is a trauma event in dream, based on DSM IV criteria. Code the event whether or not the it seems to have traumatized a dream character.

11. Based on DSM IV, is there a traumatic event in dream? ☐ Y ☑ N

DSM IV: Traumatic events that are experienced directly include, but are not limited to, military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, natural or manmade disasters, severe automobile accidents, or being diagnosed with a life-threatening illness. For children, sexually traumatic events may include developmentally inappropriate sexual experiences without threatened or actual violence or injury.

Bibliography

Agargun, M., & Cartwright, R. (2003). REM sleep, dream variables and suicidality in depressed patients. *Psychiatry Res., 119*(1-2), 33-39.

Agargun, M. Y., Kara, H., Ozer, O., Selvi, Y., Kiran, U., & Kiran, S. (2003). Nightmares and dissociative experiences: the key role of childhood traumatic events. *Psychiatry Clin Neurosci., 57*(2), 139-145.

Agargun, M. Y., Kara, H., Ozer, O., Selvi, Y., Kiran, U., & Ozer, B. (2003). Clinical importance of nightmare disorder in patients with dissociative disorders. *Psychiatry Clin Neurosci., 57*(6), 575-579.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR* (4th ed.). Washington, DC: American Psychiatric Association.

Anonymous. (1994). *The Tibetan Book of the Dead: Liberation through Understanding in the Between.* (R. Thurman, Trans.). New York: Bantam Books.

Astur, R., St Germain, S., Tolin, D., Ford, J., Russell, D., & Stevens, M. (2006). Hippocampus function predicts severity of post-traumatic stress disorder. *Cyberpsychol Behav., 9*(2), 234-240.

Babbie, E. (2002). *The basics of social research* (2nd. ed.). Belmont, CA: Wadsworth/Thompson Learning.

Barasch, M. (2000). *Healing Dreams.* New York: Riverhead Books.

Barker, R. L. (1999). *Social work dictionary*. Washington, DC: NASW Press.

Barrett, D. (2002). The "Royal Road" Becomes a Shrewd Shortcut: The Use of Dreams in Focused Treatment. *Journal of Cognitive Psychotherapy, 16*(1), 55-64.

Belicki, K., & Cuddy, M. (1996). Identifying Sexual Trauma Histories from Patterns of Sleep and Dreams. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Berzoff, J., & Silverman, P. (Eds.). (2004). *Living with Dying: A Handbook for End-of-Life Healthcare Practitioners* New York: Columbia University Press.

Blagrove, M., Farmer, L., & Williams, E. (2004). The relationship of nightmare frequency and nightmare distress to well-being. *J Sleep Res., 13*(2), 129-136.

Bland, J., Mezey, G., & Dolan, B. (1999). Special women, special needs: a descriptive study of female Special Hospital patients. *Journal of forensic psychiatry, 10*(1), 34-35.

Boa, F. (1992). *The Way of the Dream: Conversations on Jungian Dream Interpretation with Marie-Louise von Franz.* . Boston: Shambala.

Bogdan, R., & Biklen, S. (1983). *Qualitative Research for Education: An Introduction to Theory and Methods*. Boston: Allyn and Bacon.

Bosnak, R. (1996a). Integration and Ambivalence in Transplants. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Bosnak, R. (1996b). *Tracks in the Wilderness of Dreaming.* New York: Dell Publishing.

Bosnak, R. (1997). *Christopher's Dreams: Dreaming and Living With AIDS.* New York: Dell Publishing.

Bowman, G. (2001). Emotions and illness. *Journal of Advanced Nursing, 34*(2), 256-263.

Braun, A. R., Balkin, T. J., Wesensten, N. J., Gwadry, F., Carson, R. E., Varga, M., et al. (1998). Dissociated pattern of activity in visual cortices and their projections during human rapid eye movement sleep. *Science, 279*(5347), 91-95.

Bromberg, P. (2006). *Awakening the Dreamer: Clinical Journeys* Mahwah, NJ: The Analytic Press

Brunkow, K. (1996). Working with Dreams of Survivors of Violence: Facilitating Crisis Intervention with a Psychoanalytical Approach. In J. Edward & J. Sanville (Eds.), *Fostering Healing and Growth: A Psychoanalytical Social Work Approach*. Northvale, NJ: Jason Aronson, Inc.

Buhler, K., & Heim, G. (2001). General Introduction to the Psychotherapy of Pierre Janet. *American Journal of Psychotherapy, 55*(1), 74-91.

Bulkeley, K. (2003). *Dreams of Healing: Transforming Nightmares Into Visions of Hope.* New York: Paulist Press.

Bulkeley, K., & Bulkeley, P. (2005). *Dreaming Beyond Death*. Boston: Beacon Press.

Burch, W. E. (2003). *She Who Dreams: A Journey Into Healing Through Dreamwork.* Novato, CA: New World Library.

Carpenter, K. A. (1987). The effects of positive and negative pre-sleep stimuli on dream experiences. *The Journal of Psychology, 122*, 33-37.

Cartwright, R. (1996). Dreams and Adaptation to Divorce. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Cartwright, R. (2000). How and Why the Brain Makes Dreams: A Report Card on Current Research on Dreaming,. *Behavioral and Brain Sciences, 23*(6), 914-916.

Cartwright, R., Agargun, M., Kirkby, J., & Friedman, J. (2006). Relation of Dreams to Waking Concerns. *Psychiatry Research, 141*, 261-270.

Cartwright, R., Baehr, E., Kirkby, J., Pandi-Perumal, S., & Kabat, J. (2003). REM sleep reduction, mood regulation and remission in untreated depression. *Psychiatry Res, 121*(2), 159-167.

Carver, C. S. (2001). Affect and the functional bases of behavior: On the dimensional structure of affective experience. *Personality and Social Psychology Review, 5*, 345-356.

Charney, D. (2004). Psychobiological mechanisms of resilience and vulnerability: implications for successful adaptation to extreme stress. *Am J Psychiatry., 161*(2), 195-216.

Coolidge, F., & Fish, C. (1983-84). Dreams of the Dying. *Omega: Journal of Death & Dying, 14*(1), 1-8.

Corriere, R., Hart, J., Karle, W., Binder, J., Gold, S., & Woldenberg, L. (1977). Toward a new theory of dreaming. *J Clin Psychol. , 33*(3), 807-820.

Cwikel, J., & Behar, L. (1999). Organizing social work services with adult cancer patients: integrating empirical research. *Soc Work Health Care, 28*(3), 55-76.

Davidson, J., Lee-Archer, S., & Sanders, G. (2005). Dream imagery and emotion. *Dreaming, 15*(1), 33-47.

De Koninck, J., & Brunette, R. (1991). Presleep suggestion related to a phobic object: successful manipulation of reported dream affect. *J Gen Psychol., 118*(3), 185-200.

Delaney, G. (1990). Personal and Professional Problem Solving in Dreams. In S. Krippner (Ed.), *Dreamtime and Dreamwork: Decoding the Language of the Night*. New York: GP. Putnam's Sons.

Domhoff, G. (2003). *The Scientific Study of Dreams: Neural Networks, Cognitive Development, and Content Analysis*. Washington, DC: American Psychological Association.

Domhoff, G., Sneider, A., & Hall, C. S. (2006). Coding Rules for the Hall/Van de Castle System of Quantitative Dream Content Analysis. Retrieved October, 13, 2006, from http://psych.ucsc.edu/dreams/Coding/index.html.

Donnelly, G., & Concetta, D. (1996). Dreams: Their Function in Health and Illness. *Holistic Nursing Practice, 10*(4), 461-468.

Ekman, P. (1990). Are there basic emotions? *Psychol Rev., 97*(3), 315-331.

Esposito, K., Benitez, A., Barza, L., & Mellman, T. (1999). Evaluation of Dream Content in Combat-Related PTSD. *Journal of Traumatic Stress, 12*(4), 681-687.

Feldman Barrett, L., Gross, J. J., Conner, T., & Benvenuto, M. (2001). Knowing what you're feeling and knowing what to do about it: Mapping the relation between emotion differentiation and emotion regulation. *Cognition and Emotion, 15*, 713-724.

Fosse, M. J., Fosse, R., Hobson, J. A., & Stickgold, R. J. (2003). Dreaming and Episodic Memory: A Functional Dissociation? *Journal of Cognitive Neuroscience, 15*(1), 1-9.

Fosshage, J. L. (2000). The Organizing Function of Dreaming - A Contemporary Psychoanalytical Model. *Psychoanalytic Dialogues, 10*(1), 103-117.

Fosshage, J. L. (2002). A Relational Self Psychological Perspective. *Journal of Analytical Psychology, 47*(1), 67-82.

Freud, S. (1911). *The interpretation of dreams*. Retrieved December 23, 2005, from http://www.psywww.com/books/interp/toc.htm.

Frewen, P., & Lanius, R. (2006). Toward a psychobiology of posttraumatic self-dysregulation: reexperiencing, hyperarousal, dissociation, and emotional numbing. *Ann N Y Acad Sci., 1071*, 110-124.

Fujita, F., Diener, E., & Sandvik, E. (1991). Gender differences in negative affect and well-being: the case for emotional intensity. *J Pers Soc Psychol., 61*(3), 427-434.

Galvin, F., & Hartmann, E. (1990). Nightmares: Terrors of the Night. In S. Krippner (Ed.), *Dreamtime and Dreamwork: Decoding the Language of the Night*. New York: GP. Putnam's Sons.

Garfield, P. (1991). *The Healing Power of Dreams*. New York: Simon and Schuster.

Germain, A., Krakow, B., Faucher, B., Zadra, A., Nielsen, T., Hollifield, M., et al. (2004). Increased Mastery Elements Associated With Imagery Rehearsal Treatment for Nightmares in Sexual Assault Survivors With PTSD. *Dreaming, 14*(4), 195-206.

Gilchrist, S., Davidson, J., & Shakespeare-Finch, J. (2007). Dream Emotions, Waking Emotions, Personality Characteristics and Well-Being - A Positive Psychology Approach. *Dreaming, 17*(3), 14.

Goelitz, A. (2001a). Dreaming Their Way into Life: A Group Experience With Oncology Patients. *Social Work with Groups, 24*(1), 53-67.

Goelitz, A. (2001b). Nurturing Life with Dreams: Therapeutic Dream Work with Cancer Patients. *Clinical Social Work Journal, 29*(4), 375-385.

Goleman, D. (1995). *Emotional Intelligence.* . New York: Bantam Books.

Graziano, R. (1997). The Challenge of Clinical Work with Survivors of Trauma In J. Brandell (Ed.), *Theory and Practice in Clinical Social Work* (pp. 380-403). New York: Free Press.

Greenberg, L. (2004). Emotion-focused therapy. *Clinical Psychology and Psychotherapy. (special issue), 11*, 3-16.

Greenberg, L., & Bolger, E. (2001). An emotion-focused approach to the overregulation of emotion and emotional pain. *J Clin Psychol, 57*(2), 197-211.

Greenberg, L., & Paivio, S. (1998). Allowing and accepting painful emotional experiences. . *The International Journal of Action Methods, 51*(2), 47-62.

Greenberg, L. S., & Pascual-Leone, A. (2006). Emotion in psychotherapy: A practice-friendly research review. *Journal of Clinical Psychology, 62*(5), 611 - 630.

Greenberg, R., & Pearlman, C. A. (1999). The Interpretation of Dreams: A Classic Revisited. *Psychoanalytic Dialogues, 9*(6), 749-765.

Griffin, J., & Kiser, B. (2003). The Dreamcatcher. *New Scientist, 178*(2390), 44-47.

Grinnell, R. M. (2001). *Social Research and Evaluation: Quantitative and Qualitative Approaches.* (2nd. ed.). Itasca, IL: F.E. Peacock.

Gross, J. J., & John, O. P. (2003). Individual Differences in Two Emotion Regulation Processes: Implications for Affect, Relationships, and Well-Being. *Journal of Personality and Social Psychology, 85*(2), 348-362.

Guiley, R. E. (1998). *Dreamwork for the Soul*. New York: Berkeley Books.

Haggis, P. (Writer) (2007). In the Valley of Elah In P. Haggis & B. Hayward (Producer): Warner Independent.

Hall, C. S. (1947). Diagnosing Personality by the Analysis of Dreams. *The Journal of Abnormal and Social Psychology, 42*, 68-79.

Hartmann, E. (1996). Who Develops PTSD Nightmares and Who Doesn't. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Hartmann, E. (1998). Nightmare after Trauma as Paradigm for all Dreams: A New Approach to the Nature and Functions of Dreaming. *Psychiatry: Interpersonal & Biological Processes, 61*(3), 223-238.

Hartmann, E. (2000). The waking-to-dreaming continuum and the effects of emotion. *Behavioral and Brain Sciences, 23*(6), 947-950.

Hartmann, E. (2001). *Dreams and nightmares: the origin and meaning of dreams* (1st paperback ed.). Cambridge, Mass.: Perseus.

Hartmann, E., & Basile, R. (2003). Dream Imagery Becomes More Intense After 9/11/01. *Dreaming, 13*(2), 61-66.

Hartmann, E., Zborowski, M., & Kunzendorf, R. (2001). The emotion pictured by a dream: An examination of emotions contextualized in dreams. . *Sleep and Hypnosis, 3*(33-43).

Hartmann, E., Zborowski, M., Rosen, R., & Grace, N. (2001). Contextualizing Images in Dreams and Daydreams. *Dreaming, 11*(3), 115-126.

Herman, J. L. (1992). *Trauma and recovery*. New York, N.Y.: BasicBooks.

Hill, C. E., Diemer, R., Hess, S., Hillyer, A., & Seeman, R. (1993). Are the Effects of Dream Interpretation on Session Quality, Insight, and Emotions Due to the Dream Itself, to Projection, or to the Interpretation Process? *Dreaming, 3*(4), 1-11.

Hobson, A., Pace-Schott, E., & Stickgold, R. (2000). Dreaming and the Brain: Toward a Cognitive Neuroscience of Conscious States. *Behavioral and Brain Sciences, 23*(6), 793-1121.

Howard, J., & Goelitz, A. (2004). Psychoeducation as a Response to Community Disaster. *Brief Treatment and Crisis Intervention, 4*, 1-10.

Janesick, V. (1994). The Dance of Qualitative Research Design: Metaphor and Meaning. . In N. Denzin & Y. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 209-219). Newberry Park, CA: Sage Publications.

Jick, T. (1983). *Qualitative Methodology.* . Newberry Park, CA: Sage Publications.

Jung, C. G. (1974). *Dreams* (Bollingen paperback ed.). Princeton, N.J.: Princeton University Press.

Kabat-Zinn, J. (1991). *Full Catastrophic Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*. New York: Dell Publishing.

Kahn, D., & Hobson, A. (2005). Theory of Mind in Dreaming: Awareness of Feelings and Thoughts of Others in Dreams. *Dreaming, 15*(1), 48-57.

Kahn, D., Pace-Schott, E., & Hobson, J. A. (2002). Emotion and Cognition: Feeling and Character Identification in Dreaming. *Consciousness & Cognition, 11*(1), 34.

Kalsched, D. (1996). *The Inner World of Trauma*. London and New York: Routledge.

Kane, C. M. (1994). Differences in the Manifest Dream Content of Anglo-American, Mexican-American, and African-American College Women. *Journal of Multicultural Counseling and Development, 22*(4).

Kilroe, P. (2000). The Dream as Text, The Dream as Narrative. *Dreaming, 10*(3), 1-15.

King, J., & Sheehan, J. (1996). The Use of Dreams with Incest Survivors. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

King, L. A., & Emmons, R. A. (1991). Psychological, physical, and interpersonal correlates of emotional expressiveness, conflict, and control. *European Journal of Personality, 5*(2), 131-150.

Kramer, M., & Barasch, M. I. (2000). Dreamspeak. *Psychology Today, 33*(5), 56-61.

Krippner, S. (1990). Tribal Shamans and Their Travels into Dreamtime. In S. Krippner (Ed.), *Dreamtime and Dreamwork: Decoding the Language of the Night*. New York: GP. Putnam's Sons.

Krystal, H. (1979). Alexithymia and Psychotherapy. *American Journal of Psychotherapy, 33*(1), 17-31.

Kunzendorf, R., Hartmann, E., Thomas, L., & Berensen, L. (1999-2000). Imagination cognition and personality. *Consciousness in Theory, 19*(3), 269-278.

Lanius, R., Williamson, P., Densmore, M., Boksman, K., Neufeld, R., Gati, J., et al. (2004). The nature of traumatic memories: a 4-T FMRI functional connectivity analysis. *Am J Psychiatry., 161*(1), 36-44.

Lanius, R., Williamson, P., Hopper, J., Densmore, M., Boksman, K., Gupta, M., et al. (2003). Recall of emotional states in posttraumatic stress disorder: an fMRI investigation. *Biol Psychiatry., 53*(3), 204-210.

Lansky, M. (1991). The transformation of affect in posttraumatic nightmares. *Bull Menninger Clin., 55*(4), 470-490.

Lavie, P., & Kaminer, H. (1996). Dreaming in Holocaust Survivors. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Litz, B., Orsillo, S., Kaloupek, D., & Weathers, F. (2000). Emotional processing in posttraumatic stress disorder. *J Abnorm Psychol., 109*(1), 26-39.

Lothane, Z. (1983). Reality, Dream, and Trauma. *Contemporary Psychoanalysis, 19*(3), 423-443.

Mallon, B. (2000). *Dreams, Counseling and Healing*. Dublin: Newleaf.

McCann, I. L., & Pearlman, L. A. (1990). *Psychological Trauma and the Adult Survivor: Theory, Therapy, and Transformation*. New York: Brunner/Mazel.

McFall, M., Fontana, A., Raskind, M., & Rosenheck, R. (1999). Analysis of violent behavior in Vietnam combat veteran psychiatric inpatients with posttraumatic stress disorder. *J Trauma Stress., 12*(3), 501-517.

Mellman, T., David, D., Bustamante, V., Torres, J., & Fins, A. (2001). Dreams in the Acute Aftermath of Trauma and Their Relationship to PTSD. *Journal of Traumatic Stress, 14*(1), 241-247.

Mindell, A. (1998). *Dreambody: The Body's Role in Revealing the Self*. Portland: Lao Tse Press.

Moss, R. (1996). *Conscious Dreaming: A Spiritual Path for Everyday Life*. New York: Three Rivers Press.

Moss, R. (1998). *Dreamgates*. New York: Three Rivers Press.

Muff, J. (1996). Images of life on the verge of death: Dreams and drawings of people with AIDS. *Perspectives in Psychiatric Care, 32*(3), 10-23.

Mundy, E., & Baum, A. (2004). Medical Disorders as a Cause of Psychological Trauma and Posttraumatic Stress Disorder. *Current Opinion in Psychiatry, 17*(2), 123-128.

Nader, K. (1996). Children's Traumatic Dreams. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Najam, N., Mansoor, A., Kanwal, R. H., & Naz, S. (2006). Dream Content: Reflections of the Emotional and Psychological States of Earthquake Survivors. *Dreaming, 16*(4), 9.

Najavits, L. (2002). *Seeking Safety: A Treatment Manual for PTSD and Substance Abuse*. New York: The Guilford Press.

Nielsen, T., & Germain, A. (2000). Post-traumatic nightmares as a dysfunctional state. *Behavioral and Brain Sciences, 23*(6), 978-979.

Ochsner, K. N., Bunge, S. A., Gross, J. J., & Gabrieli, J. D. E. (2002). Rethinking Feelings: An fMRI Study of the Cognitive Regulation of Emotion. *Journal of Cognitive Neuroscience 14*(8), 1215-1229.

Ortony, A., & Turner, T. (1990). What's basic about basic emotions? *Psychological Review, 97*(3), 315-331.

Panksepp, J. (2000). "The dream of reason creates monsters"...especially when we neglect the role of emotions in REM-states. *Behavioral and Brain Sciences, 23*(6), 988-990.

Patton, M. (2002). *Qualitative Research & Evaluation Methods* (3rd. ed.). Thousand Oaks, CA: Sage Publications.

Pearlman, L. A., & Saakvitne, K. (1995). *Trauma and the therapist: Countertransference and vicarious tramatization in psychotherapy with incest survivors.* New York: Norton.

Pert, C. B. (1999). *Molecules of Emotion: The Science Behind Mind-Body Medicine*. New York: Simon and Schuster.

Provost, J. A. (1999). A dream focus for short-term growth groups. *Journal for Specialists in Group Work, 24*(1), 74-87.

Punamaki, R. (1997). Determinants and Mental Health Effects of Dream Recall Among Children Living in Traumatic Conditions [Electronic Version]. *Dreaming: Journal of the Association for the Study of Dreams*, *7*. Retrieved January 3, 2004 from http://www.asdreams.org.

Punamaki, R. (1999). The Relationship of Dream Content and Changes in Daytime Mood in Traumatized Vs. Non-Traumatized Children [Electronic Version]. *Dreaming: Journal of the Association for the Study of Dreams*, *9*. Retrieved January 3, 2004 from http://www.asdreams.org.

Revonsuo, A. (2000). The Reinterpretation of Dreams: An Evolutionary Hypothesis of the Function of Dreaming. *Behavioral and Brain Sciences, 23*(6), 793-1121.

Richards, J. M., & Gross, J. J. (2000). Emotion Regulation and Memory: The Cognitive Costs of Keeping One's Cool. *Journal of Personality and Social Psychology, 79*(3), 410-424.

Rinpoche, T. W. (1998). *The Tibetan Yogas of Dream and Sleep*. Ithica, NY: Snow Lion Publications.

Robbins, P., Tanck, R., & Houshi, F. (1985). Anxiety and dream symbolism. *J Pers., 53*(1), 17-22.

Rothbaum, B., & Mellman, T. (2001). Dreams and Exposure Therapy in PTSD. *Journal of Traumatic Stress, 14*(3), 481-490.

Rothschild, B. (2000). *The Body Remembers: The Psychophysiology of Trauma and Trauma Treatment*. New York and London: W.W. Norton & Company.

Rubinstein, K. (1990). How Men and Women Dream Differently. In S. Krippner (Ed.), *Dreamtime and Dreamwork: Decoding the Language of the Night*. New York: GP. Putnam's Sons.

Russell, J., & Barrett, L. (1999). Core Affect, Prototypical Emotional Episodes, and Other Things Called Emotion: Dissecting the Elephant *Journal of Personality and Social Psychology, 76*(5), 805-819.

Schutte, N. S., Malouff, J. M., Simunek, M., McKenley, J., & Hollander, S. (2002). Characteristic emotional intelligence and emotional well-being. *Cognition and Emotion, 16*(6), 769-785.

Shin, L. M., Rauch, S. L., & Pitman, R. K. (2006). Amygdala, Medial Prefrontal Cortex, and Hyppocampal Function in PTSD. *Ann. N.Y. Acad. Sci., 1071*, 67-79.

Siegel, A. (1996). Dreams of Firestorm Survivors. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Siegel, D. (2001a). Memory: an overview, with emphasis on developmental, interpersonal, and neurobiological aspects. *J Am Acad Child Adolesc Psychiatry., 40*(9), 997-1011.

Siegel, D. (2001b). Toward an interpersonal neurobiology of the developing mind: Attachment relationships, mindsight, and neural integration. *Infant Mental Health Journal, 22*(1-2), 67-94.

Siegel, J. (2001c). The REM sleep-memory consolidation hypothesis. *Science, 294*(5544), 1058-1063.

Silvia, P. J. (2002). Self-Awareness and the Regulation of Emotional Intensity. *Self and Identity, 1*(1), 3-10.

Smith, M. R., Antrobus, J. S., Gordon, E., Tucker, M. A., Hirota, Y., Wamsley, E. J., et al. (2004). Motivation and affect in REM sleep and the mentation reporting process. *Consciousness & Cognition, 13*(3), 501-511.

Smith, R. C. (1990). Traumatic Dreams as Early Warning of Health Problems. In S. Krippner (Ed.), *Dreamtime and Dreamwork: Decoding the Language of the Night*. New York: GP. Putnam's Sons.

Sternberg, E. M. (2000). *The Balance Within: The Science Connecting Health and Emotions*. New York: W.H. Freeman and Company.

Stickgold, R., Hobson, J. A., Fosse, R., & Fosse, M. (2001). Sleep, Learning, and Dreams: Off-line Memory Reprocessing. *Science, 294*(5544), 1052.

Stoddard, F., Chedekel, D., & Shakun, L. (1996). Dreams and Nightmares of Burned Children In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Tick, E. (2001). *The Practice of Dream Healing*. Wheaton, IL: Quest Books.

U.S. Department of Health and Human Services. (2003). HHS Study Finds Life Expectancy in the U.S. Rose to 77.2 Years in 2001. Retrieved October 6, 2003, from http://www.merck.com/mrkshared/mmanual home/sec1/4.jsp.

Ullman, M., & Zimmerman, N. (1982). *Working With Dreams*. New York: Dell Publishing.

Ulman, R., & Brothers, D. (1988). *The Shattered Self a Psychoanalytic Study of Trauma*. Hillsdale, NJ: The Analytic Press.

Valli, K. (2006). The effect of trauma on dream content - a field study of palestinian children. *Dreaming, 16*(2), 63-87.

Van de Castle, R. L. (1995). *Our dreaming mind* (1st Ballantine Books trade pbk. ed.). New York: Ballantine Books.

van der Kolk, B. (2006). Clinical implications of neuroscience research in PTSD. *Ann N Y Acad Sci., 1071*, 277-293.

van der Kolk, B. A., Weisaeth, L., & McFarlane, A. C. (Eds.). (1996). *Traumatic stress: the effects of overwhelming experience on mind, body, and society*. New York: Guilford Press.

Varela, F. J. (Ed.). (1997). *Sleeping, Dreaming, and Dying: An Exploration of Consciousness wih the Dalai Lama*. Boston: Wisdom Publications.

Vermetten, E., & Bremner, J. (2002). Circuits and systems in stress. II. Applications to neurobiology and treatment in posttraumatic stress disorder. *Depress Anxiety., 16*(1), 14-38.

Vertes, R. P., & Eastman, K. E. (2000). The case against memory consolidation in REM sleep. *Behavioral and Brain Sciences, 23*(6), 867-876.

von Franz, M. (1998). *On Dreams and Death: A Jungian Interpretation*. Chicago: Open Court.

Wegner, D., Wenzlaff, R., & Kozak, M. (2004). Dream rebound: the return of suppressed thoughts in dreams. *Psychol Sci., 15*(4), 232-236.

Welman, M., & Faber, P. (1992). The dream in terminal illness: a Jungian formulation. *J Anal Psychol., 37*(1), 61-81.

Whitmont, E. C. (1993). *The Alchemy of Healing: Psyche and Soma*. Berkeley: Homeopathic Educational Services and North Atlantic Books.

Wilmer, H. (1996). The Healing Nightmare: War Dreams of Vietnam Veterans In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Winson, J. (2002). The Meaning of Dreams. *Scientific American, 12*(1), 54-61.

Wolf, F. A. (1994). *The dreaming universe: a mind-expanding journey into the realm where psyche and physics meet*. New York: Simon & Schuster.

Wolfsdorf, B., & Zlotnick, C. (2001). Affect management in group therapy for women with posttraumatic stress disorder and histories of childhood sexual abuse. *J Clin Psychol., 57*(2), 169-181.

Wood, K. M. (1990). Epistemological issues in the development of social work practice knowledge. In L. V. Sherman & W. I. Reid (Eds.), *Advances in clinical social work research* (pp. 373-390). Silver Spring, MD: NASW Press.

Yu, C. K.-C. (2007). Emotions Before, During, and After Dreaming Sleep. *Dreaming, 17*(2), 14.

Zadra, A. (1996). Recurrent Dreams: Their Relation to Life Events. In D. Barrett (Ed.), *Trauma and Dreams*. Cambridge: Harvard University Press.

Zanasi, M., De Persis, S., Caporali, M., & Siracusano, A. (2005). Dreams and age. *Percept Mot Skills., 100*(3), 925-938.

Zwig, A. (1990). A Body-Oriented Approach to Dreamwork. In S. Krippner (Ed.), *Dreamtime and Dreamwork: Decoding the Language of the Night*. New York: G.P. Putnam's Sons.