RESPONSE TO THE TRAUMA OF RECEIVING AN HIV DIAGNOSIS: RELATION AMONG ASSUMPTIVE WORLD VIEW, HOPE, AND POSTTRAUMATIC GROWTH IN INDIVIDUALS LIVING WITH HIV/AIDS

A Dissertation Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Philosophy

by

Melissa Beason-Smith

August, 2011

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Abstract

Throughout its twenty-year history, HIV/AIDS has evolved from a disease considered to affect only gay men to one that impacts the lives of men, women, and children of different ages and from various backgrounds. HIV/AIDS is a complex and traumatizing disease, impacting those infected in unpredictable ways. Being diagnosed and living with a terminal illness is considered by many to be a psychologically traumatizing experience (Collins, Taylor, & Skokan, 1990; Folkman, Moskowitz, Ozer, & Park, 1997; Janoff-Bulman, 1989b; Schwartzberg, 1993), involving responses similar to such traumas as rape, incest, and the death of a loved one. The research on the traumatic effects of an HIV diagnosis has focused primarily on the caregivers of HIV+ individuals, rather than those infected with the disease. As medical treatment improves and extends the physical life of those infected, the emotional quality of life becomes an important issue to consider.

The current study examined the impact of receiving an HIV diagnosis, paying particular attention to the relation among assumptive world view, hope, and posttraumatic growth in those living with HIV/AIDS. The results indicated a positive relation exists among the three scales with the scores on hope and assumptive world view showing a significant positive correlation. Although the scores on the three scales did not differ by gender, age, sexual orientation, or time since diagnosis, significant differences were found according to ethnicity with Hispanic and Caucasian participants scoring

significantly higher on the World Assumptions Scale than African Americans. The current study provides valuable insight into the coping process of HIV+ persons and can provide a preliminary understanding of this experience to those mental health professionals working with this population, as well as infected persons coming to terms with their diagnosis.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

The impact of trauma on survivors has been studied at great length; however, little has been done to examine the relation between assumptive world view, hope, and posttraumatic growth in traumatized individuals. Additionally, the research on the traumatic effects of an HIV diagnosis has been limited and has focused primarily on caregivers of HIV+ individuals, rather than those living with the illness. The current study intends to expand on the research in this area, and examine possible connections among assumptive world view, posttraumatic growth, and hope in persons living with HIV/AIDS.

The human immunodeficiency virus (HIV) has been a destructive force in American lives since the early 1980s. In 1982, before even receiving the name HIV, 1744 people were diagnosed with the disease. Since that time, the rate of infections has been astronomical with 43,171 people diagnosed during 2003, the latest years for which statistics are available (CDC, 2005). Throughout its twenty-year history, HIV/AIDS has evolved from a disease considered to affect only gay men to a disease that steals the lives of men, women, and children of different ages from a variety of ethnic backgrounds.

HIV/AIDS is a complex and unpredictable disease, impacting people's lives in a variety of ways. Some individuals living with the disease experience an immediate deterioration of their physical and mental health, while others do not experience the negative consequences of the disease for many years. Therefore, coping with HIV/AIDS is a unique experience for each person and may change over time as the disease does.

Being diagnosed and living with a terminal illness is considered by many to be a psychologically traumatizing experience (Collins, Taylor, & Skokan, 1990; Folkman, Moskowitz, Ozer, & Park, 1997; Janoff-Bulman, 1989b; Schwartzberg, 1993), involving responses similar to such traumas as rape, incest, and the death of a loved one. McCann and Pearlman (1990) define psychological trauma as an event that (1) is sudden, unexpected, or non-normative, (2) exceeds the individual's perceived ability to meet its demands, and (3) disrupts the individual's frame of reference and other central psychological needs and related schemas" (p. 10). This definition encompasses a wide variety of possible traumatic experiences such as criminal victimization, war, chronic illness, rape, sexual and physical abuse, accidents, violence, and natural disasters, any of which can have a tremendous psychological impact on the victim that is apparent years after the victimization has occurred (Janoff-Bulman, 1989a; Janoff-Bulman & Thomas, 1989; McCann & Pearlman, 1990). Whereas some individuals are taken by surprise by an HIV diagnosis, others are aware their behaviors put them at risk and the news is not unexpected. However, living with HIV/AIDS tends to meet all other criteria of a psychologically traumatic event whether sudden and unexpected or not.

A perceived lack of control often contributes to the traumatic impact of events (Tedeschi & Calhoun, 1995). Although more is known now about transmission of HIV and ways in which to protect oneself, those affected years ago were unaware of the risks they were taking and the potential consequences, leading to a sense of powerlessness upon receiving their diagnosis. Additionally, the course of the disease often leaves the infected individual feeling out of control and helpless.

Tedeschi and Calhoun (1995) suggest that the degree to which an event creates long-lasting problems is another quality leading to traumatization. Many difficulties in life are reversible with some effort. Being diagnosed with a terminal illness such as HIV is irreversible and requires a lifelong struggle both physically and emotionally. Individuals with HIV/AIDS not only experience the trauma of the diagnosis, but also succeeding traumas brought on by deteriorating health.

The current study is intended to examine the experience of individuals living with HIV/AIDS, paying particular attention to the relations among assumptive world view, posttraumatic growth, and hope. Each of these concepts, and their connection to trauma, will be discussed in detail in the following sections. The coping process, which involves the potential disruption of the assumptive world view and the struggle to grow and find hope following crisis, will also be considered as it is an ongoing experience when living with a terminal illness.

Assumptive World View

People generally function within the comfort of certain assumptions about the world that go unthreatened and unquestioned. These assumptions or cognitive schemas are the lenses through which the world is viewed (Janoff-Bulman & Thomas, 1989) and serve as a conceptual framework for understanding and organizing life experiences (McCann & Pearlman, 1990), anticipating the future (Janoff-Bulman, 1989a; Thompson & Janigian, 1988), and guiding what is noticed and remembered and how new information is interpreted (Janoff-Bulman 1989a). These cognitive schemas represent a person's assumptive world, which is described by Janoff-Bulman (1989a) as "the basic

conceptual system, developed over time, that provides us with expectations about ourselves and the world so that we might function effectively" (p. 114).

Eight assumptions comprise the assumptive world: the benevolence of the world, the benevolence of people, the distributional principles of justice, controllability, and chance, and the dimensions of self-worth, self-controllability, and luck (Janoff-Bulman, 1989a). Janoff-Bulman (1989a) contends that in order to understand the process of change and the resistance to change following traumatic events, the content of the assumptive world must be considered. The most common experience following traumatization is an overwhelming feeling of vulnerability (Janoff-Bulman, 1989a; Janoff-Bulman, 1989b; Janoff-Bulman & Berg, 1998). This response by victims says a great deal about the beliefs of non-victims and the illusory nature of their assumptions. According to Janoff-Bulman (1989a), we operate on the basis of illusions of invulnerability, which are divided into three primary categories each consisting of several assumptions: the benevolence of the world (both impersonal and personal), the meaningfulness of the world, and the worthiness of the self (Janoff-Bulman, 1989a; Janoff-Bulman, 1989b; Janoff-Bulman & Berg, 1998; Janoff-Bulman & Thomas, 1989).

The first category, the benevolence of the world, involves how negatively or positively people view the world. Is the world ultimately benevolent or malevolent; good or bad? This category consists of assumptions about the benevolence of the impersonal world and of other people. The extent to which a person believes that the world is a benevolent place determines how good or safe he or she thinks the world is. A person who believes in the benevolence of others thinks that people are generally good, kind, and caring (Janoff-Bulman, 1989a).

The meaningfulness of the world is the second category of assumptions and, according to Janoff-Bulman (1989a), involves a person's beliefs about the distribution of outcomes in terms of justice, controllability, and chance. People who view the world as just believe that outcomes are distributed fairly and we get what we deserve (Lerner, 1980); therefore, if people are "good" or "decent," they will not experience negative outcomes. The controllability of outcomes addresses people's behavior as opposed to their character. The assumption is that people can control the outcomes in life by engaging in "appropriate" behavior; and in doing so, they minimize their own vulnerability. The third assumption in the meaningfulness category is that of chance. A person who believes firmly in the randomness of outcomes or chance does not rely as heavily on the principles of justice or controllability and may believe there is no way to make sense of particular events; everything is random. The three distributional outcomes are not considered to be mutually exclusive, and people are likely to endorse each of them to some extent with greater emphasis on certain ones (Janoff-Bulman, 1989a).

The final category of assumptions, similar in nature to McCann and Pearlman's (1990) cognitive schemas of self, involves the perception of the worthiness of the self. The beliefs about oneself correspond to the distributional principles of outcomes previously discussed. The belief in one's own self-worth, or the extent to which a person views oneself as decent and good, is the first assumption within this category. Because in a just world good and moral character is expected to lead to positive outcomes, it is assumed that the more positive people perceive their moral character, the more invulnerable they will feel (Janoff-Bulman, 1989a**).** The second assumption is related to the distributional principle of controllability. The extent to which individuals see

themselves as behaving appropriately and properly determines the amount of control they think they have over outcomes. The distributional principle of chance relates to the third assumption about the self. Although people who believe that outcomes are distributed randomly do not think that there is a way of controlling negative experiences, they often believe in themselves as lucky or unlucky. The illusion of luck allows individuals to feel protected and invulnerable (Janoff-Bulman, 1989a).

According to Janoff-Bulman (1989a), the eight assumptions that comprise the assumptive world are the schemas or beliefs that are most likely to be affected by trauma. Following trauma, the conceptual framework that has been developed and that has generally served us well throughout our lives no longer makes sense (Janoff-Bulman, 1989a; Janoff-Bulman, 1989b; Janoff-Bulman & Thomas, 1989; McCann & Pearlman, 1990; Thompson & Janigian, 1988). Because it is often difficult to incorporate the traumatic experience into the old assumptions, the assumptions become threatened. The victim must either assimilate the new information in order to make it fit into the old assumptions or change the old assumptions to accommodate the new reality (Janoff-Bulman, 1989a; McCann & Pearlman, 1990). The traumatic event is often too negative to be easily assimilated into a positive assumptive worldview; however, changing one's basic assumptions threatens a breakdown of the entire cognitive system. The individual faces the task of making sense of the new and negative information within the already existing assumptions, which may involve the use of a variety of coping strategies.

Hope

Hope is often considered an abstract concept with much variety in definition. Snyder (1993) provides a concise and tangible definition of hope that will be used

throughout this paper and is as follows: "a cognitive set that is based on a reciprocally derived sense of successful (a) agency (goal-directed determination) and (b) pathways (planning of ways to meet goals)" (p. 274). According to Snyder, agency and pathways are both necessary to achieve the high-hope cognitive set (Snyder, 1993; Snyder, 1995; Snyder, 1994; Snyder, 1998; Snyder, 2000b; Snyder, Sympson, Michael, & Cheavens, 1999). In other words, an individual must have the desire and determination to get what he wants (agency), and also must have the ability to make it happen (pathways).

Traumatic experiences such as pain, loss, and suffering have the potential for inhibiting a person's sense of capability to achieve life's goals (Snyder, 1996; Snyder, 1998; Snyder, 2000a). Snyder (1998) proposes that physical pain restricts the typical pathways to hope leading to a sense of loss and suffering. HIV/AIDS is often associated with a great deal of physical and emotional pain, suggesting those infected may struggle with the energy and ability to achieve their goals and maintain a high level of hope. However, high-hope people are often able to develop new approaches to achieving modified goals once the initial loss is grieved (Snyder, 1998). The ways in which individuals maintain or re-establish a high level of hope following trauma will be discussed in more depth in a later section of this paper pertaining to coping.

Snyder, Feldman, Taylor, Schroeder, and Adams (2000) make a compelling argument for the important role hope plays in both primary and secondary prevention of psychological and physical problems. Primary prevention involves steps or action taken to prevent a problem from happening, whereas secondary prevention requires the individual to identify and manage the problem once it has occurred. The researchers suggest high-hope individuals are proactive in educating themselves on potential risks

and making necessary decisions to avoid complications if possible. If high-hopers do experience psychological and/or physical distress, which is not uncommon, they are then better able than low-hopers to find new pathways to their goals and the motivation or agency to achieve such goals. For example, in a study of college women, high-hope, as compared to low-hope, women were more educated about cancer and risk factors and were better able to imagine new pathways to their goals if cancer were to affect them (Irving, Snyder, Crowson, 1998).

The idea of prevention is an interesting one when examining HIV diagnosis. If high-hope individuals are more likely to educate themselves on risk factors and avoid behaviors that place them at risk, it would seem those persons infected with HIV once the risk factors were known would not fall into the high-hope category. The same individuals would be likely to find difficulty in creating new pathways to their goals once diagnosed with HIV. On the other hand, high-hope persons may have been infected prior to knowledge about transmission. In which case, they would not have had the necessary information to prevent infection but would have the ability to find new pathways to goals and motivation or energy to reach those goals, leading to longer and healthier life following diagnosis.

Posttraumatic Growth

In the aftermath of trauma, survivors typically experience a great deal of confusion and suffering, as their schemas about the world are threatened and potentially disrupted. However, surprising and positive outcomes can result from the struggle with trauma and are referred to by some as posttraumatic growth (Tedeschi & Calhoun, 2004; Tedeschi & Calhoun, 1995). Tedeschi and Calhoun (2004) define posttraumatic growth

as “positive psychological change experienced as a result of the struggle with highly challenging life circumstances” (p.1). In order for posttraumatic growth to occur, the previous assumptions of the individual must be challenged and reconstructed in a way that incorporates the traumatic experience. The traumatized individual’s development surpasses that present prior to the event or crisis (Tedeschi & Calhoun, 2004).

As previously discussed, trauma challenges one’s basic beliefs about how the world and others function. Growth does not occur directly from the trauma, but from the struggle with the shattered assumptions and the attempt to reconstruct a framework for understanding the world in light of the new reality (Tedeschi & Calhoun, 1995; Tedeschi & Calhoun, 2004; Tedeschi & Kilmer, 2005). The threat to the assumptive world brings about a great deal of psychological distress and discomfort. However, the new schemas or assumptions developed following a trauma include an understanding of the traumatic event and possible future events, leading to the development of an assumptive world view that is more resistant to shattering (Janoff-Bulman, 1989a; Janoff-Bulman, 1989b; Tedeschi & Calhoun, 1995; Tedeschi & Calhoun, 2004).

Tedeschi and Calhoun (2004) suggest that it is the processing of the highly emotional aspects of traumatic events, not just the intellectual processing, that is transformative following trauma. Posttraumatic growth occurs as a result of the attempt at psychological survival and exists alongside the distress brought on by the trauma. In other words, experiencing posttraumatic growth does not prevent the individual from suffering, but develops out of the suffering.

According to Tedeschi and Calhoun (2004), posttraumatic growth consists of five domains: greater appreciation of life; more intimate relationships with others; greater

sense of personal strength; recognition of new possibilities for one's life; and spiritual development. The five domains are not mutually exclusive, but impact and influence each other. Following trauma, survivors often experience an increased awareness and appreciation for the small, everyday life experiences. The intimate relationships of those who have experienced trauma are frequently enhanced because of the survivors increased compassion and sensitivity to the needs and feelings of others (Tedeschi & Calhoun, 1995). Interestingly, a greater sense of personal strength appears to go hand-in-hand with an increased awareness of one's vulnerability. No longer living with a false sense of invulnerability allows the individual to take steps toward living a healthier, safer life. Those struggling with the aftermath of trauma may find their spiritual beliefs weakening initially. However, through the struggle to understand the negative event, the survivor commonly experiences a strengthening of beliefs.

Coping

Trauma survivors appear to develop a trauma narrative as they reflect on discrepancies involving unattained goals or schemas and life events (Tedeschi & Calhoun, 2004). This narrative typically includes a before and after the trauma and views the trauma as the turning point. Disengaging from inaccessible goals and an assumptive world view that no longer fits with one's reality allows the trauma survivor to develop new goals and a new worldview that incorporates the traumatic experience (Janoff-Bulman, 1989a; Snyder, 1996; Snyder, 1998; Snyder 2000a; Tedeschi & Calhoun, 2004).

Coping following trauma occurs in a variety of ways and falls under three main categories: manageability (Tedeschi & Calhoun, 1995) or control (Janoff-Bulman, 1989a; Tedeschi & Calhoun, 1995), comprehensibility (Tedeschi & Calhoun, 1995) or making

sense of the world and others (Janoff-Bulman, 1989a), and meaning-making (Janoff-Bulman, 1989a; Tedeschi & Calhoun, 1995). The tasks used to cope after trauma are interrelated, with success in one category impacting the success in others. Each task will now be discussed in more detail, as well as the importance of rumination on the process of coping.

Tedeschi and Calhoun (1995) suggest that rumination is a key process in making a traumatic experience manageable and comprehensible, as well as finding meaning through the struggle. Rumination has been described as a "response tendency that increases with the degree of stress and negative emotion" (Tedeschi & Calhoun, 1995, p. 60). While ruminating on the traumatic experience, the survivor alternates between denial and intrusive thoughts, giving himself manageable doses of the painful information in an effort to assimilate it into his worldview (Janoff-Bulman, 1989a; McCann & Pearlman, 1990; Tedeschi & Calhoun, 1995). Rumination increases when initial attempts to achieve goals are unsuccessful, resulting in a search for alternate pathways to such goals (Snyder, 2000a; Tedeschi & Calhoun, 1995). Rumination tends to continue until the person is able to achieve past goals or substitute new ones, at which time the individual will realize an increased sense of hope.

The first category of coping with trauma involves making a seemingly unmanageable experience manageable. Following trauma, survivors are faced with the job of assessing the degree of threat brought on by the experience and finding a way to reverse the negative impact. Initially, a great deal of effort is put forth to improve the situation and return to "normal", which is considered an attempt at "primary control". Unfortunately, many crises are not reversible and the individual is faced with the

daunting task of coming to terms with and making manageable the consequences of the trauma. The individual is likely to become discouraged and depressed if the attempts at primary control are unsuccessful (Tedeschi & Calhoun, 1995), and self-blame often appears as a result of the struggle to determine the amount of control one has following trauma (Janoff-Bulman, 1989a; Tedeschi & Calhoun, 1995).

Blame is a complicated issue that can alter the impact of a traumatic event on a person (Janoff-Bulman, 1989a; Tedeschi & Calhoun, 1995). According to Tedeschi and Calhoun (1995), blaming others leads to a sense of helplessness and further intensifies the psychological distress of the traumatized individual. On the other hand, blaming oneself may allow the individual to maintain a sense of control over life and future distressing situations. Janoff-Bulman (1989a) suggests that there are two types of self-blame: behavioral and characterological. The former involves a modifiable factor or behavior and does not threaten the self-esteem of the individual. Behavioral self-blame is considered to be adaptive following victimization because it provides victims with an explanation for the experience that enables them to maintain a sense of invulnerability. By changing the particular behavior that is thought to have led to the traumatization, victims can regain a sense of control and the world may still be considered a benevolent and meaningful place. They may continue to consider themselves worthy of good things because they have simply made a behavioral mistake. Unlike behavioral self-blame, characterological self-blame involves the enduring qualities of the individual and often leads to lowered self-esteem as victims begin to view themselves as bad and undeserving.

When the survivor accepts the uncontrollable nature of certain events and mourns the loss of unattainable goals (Snyder, 1998), "secondary control" typically occurs,

allowing an adjustment of expectations to a difficult environment to decrease unpredictability and disappointment (Tedeschi & Calhoun, 1995). Through this process of grieving old goals or hopes and altering one's pathway to different and more achievable goals, the survivor is able to re-establish a sense of hope.

The second category of coping involves making sense of the world and others and attempting to comprehend life within the new framework brought about by the trauma. Our basic beliefs about the world, the self, and others are quite resistant to change and allow us a sense of comfort or security. Traumatic events threaten one's basic assumptions and, at least initially, may appear incomprehensible to the victim. Through the process of rumination discussed earlier, the survivor alternates between denial or avoidance and intrusive, recurrent thoughts (Janoff-Bulman, 1989a) or approach (McCann & Pearlman, 1990) in an effort to assimilate the new reality into the old schemas. Often the trauma is too disruptive and disorganizing to maintain one's way of viewing and understanding the world and the existing schemas are shattered. Over a period of time, sometimes many years, the revised schemas or beliefs allow the survivor to comprehend the traumatic experience and incorporate it into her understanding of herself, the world and others, and future experiences (Janoff-Bulman, 1989a; Tedeschi & Calhoun, 1995).

Tedeschi and Calhoun (1995) define meaningfulness, the third category of coping, as "life with value and purpose, making it worth an emotional commitment" (p. 71). The schemas challenged by trauma may fail to provide meaning to traumatic experiences or may need to be reworked in order to give new meaning to life. Tedeschi and Calhoun (1995) suggest that finding meaning following trauma involves two different tasks. The

first is to find meaning in the traumatic experience itself. The second task involves maintaining a sense of meaningfulness in life despite the occurrence of trauma.

Much of the empirical research regarding meaning making following a traumatic event has examined within group differences of the bereaved (Davis, Nolen-Hoeksema, & Larson, 1998; Schwartzberg & Janoff-Bulman, 1991) and HIV+ men and their caregivers (Bower, Kemeny, Taylor, & Fahey, 1998; Schwartzberg, 1993). Although the results across studies indicate that finding meaning following a traumatic event is related to better psychological and physical adjustment, the definition of meaning varies from study to study. Some researchers have considered finding meaning to be people's ability to make sense of the trauma within their existing worldviews (Janoff-Bulman, 1989a; Janoff-Bulman & Berg, 1998; Schwartzberg & Janoff-Bulman, 1991), whereas others have suggested that people find meaning following a traumatic event by considering the positive and beneficial implications of the experience (Collins, Taylor, & Skokan, 1990; Folkman, Moskowitz, Ozer, & Park, 1997), reprioritizing their lives, and finding value and purpose in living (Tedeschi & Calhoun, 1995; Collins, Taylor, & Skokan, 1990; Folkman, Moskowitz, Ozer, & Park, 1997). Regardless of the definition, the results consistently support the notion that finding meaning in the world following trauma is adaptive and relates to improved psychological and physical adjustment (Bower et al, 1998; Davis, Nolen-Hoeksema, & Larson, 1998; Folkman et al., 1997; Schwartzberg, 1993; Schwartzberg & Janoff-Bulman, 1991).

The importance of finding meaning in an otherwise traumatic event became apparent to the researchers in a study conducted by Folkman et al. (1997) in which they were interested in the coping processes of HIV+ and HIV- caregivers and HIV+ non-

caregivers as the disease progressed into the final stages. The researchers were originally interested in how the participants coped with stressful events that accompany HIV; however, several participants encouraged them to include positive and meaningful experiences into the study suggesting that the researchers were missing an important aspect of how they coped. The participants not only had a need to find meaningful events in this traumatic experience; but they also seemed to need the opportunity to share these events with the researchers and others, a need expressed by participants across studies regardless of the traumatic event experienced (Davis, Nolen-Hoeksema, and Larson, 1998; Folkman et al, 1997; Schwartzberg, 1993).

The research suggests that this ability to find meaning in negative experiences relates to the overall psychological and physical well being of the victims (Bower et al., 1998; Davis, Nolen-Hoeksema, & Larson, 1998; Folkman et al., 1997; Schwartzberg, 1993; Schwartzberg & Janoff-Bulman, 1991). Individuals who are able to find meaning, whether it is defined as making sense of the event or finding the positive in the event, had increased psychological adjustment following trauma as measured by the Inventory to Diagnose Depression (Davis, Nolen-Hoeksema, & Larson, 1998), the Symptom Checklist (Schwartzberg & Janoff-Bulman, 1991), the Center for Epidemiological Studies Depression scale (Bower et al., 1998), and self-reports of the participants (Folkman et al., 1997; Schwartzberg, 1993). Finding meaning following the death of a loved one was negatively correlated with the intensity of grief as measured by the Texas Grief Instrument (Bower et al., 1998; Davis, Nolen-Hoeksema, & Larson, 1998; Schwartzberg & Janoff-Bulman, 1991) indicating that individuals who could make sense of or find something positive in the death of someone close to them experienced less intense grief

than those who could find no meaning in the loss. Finally, the ability to discover meaning in the death of a close friend or lover in HIV+ men was associated with higher CD4 T cell levels and lower AIDS-related mortality (Bower et al., 1998) suggesting that the ability to find meaning in a loss may be somehow related to better physical well being as well as better psychological well being.

Conclusion

Although trauma has been studied at great length, the relation among assumptive world view, hope, and posttraumatic growth has not been examined in the literature. Janoff-Bulman (1989a) contends that traumatic events threaten one's basic assumptions leading to a more negative assumptive world view. From this perspective, the shattering of one's assumptions appears to be a negative experience. On the other hand, it is because of this shattering of beliefs that posttraumatic growth occurs (Tedeschi & Calhoun, 1995). Therefore, it would seem to follow that the shattering of assumptions and negative world view are necessary steps in the growth process following trauma.

Hope is another issue altogether but ties into the world assumptions and posttraumatic growth in the traumatized population. According to Snyder (2000a), crises have the ability to shake a person's hope as the capacity to achieve certain goals following trauma is often decreased or gone completely. As with the struggle to rebuild one's assumptive world view in a more comprehensive manner, re-establishing hope following trauma can be painful and difficult yet rewarding in the end.

Similar to most traumatic experiences in life, those infected with HIV/AIDS would generally choose to avoid the trauma of receiving their diagnosis. However, it is because of the diagnosis and subsequent struggle to make sense of the world and find

hope in living that there is the potential for growth and wholeness that exceeds that previously experienced. The current study intends to examine the complex relation among assumptive world view, hope, and posttraumatic growth in HIV+ individuals in an effort to better understand why some persons ultimately find the benefit in their struggle and others become stuck in it.

Hypotheses

The first hypothesis was that scores on the PTGI would positively correlate with scores on the State Hope Scale and negatively correlate with scores on the WAS. Individuals who have experienced trauma, suffered the losses brought about by the traumatic experience, and established new goals and ways of achieving those goals will tend toward growth and will also have higher levels of hope. Growth following trauma comes out of the shattering of assumptions previously held. Therefore, it was thought that those individuals who experience the most growth would be the same individuals who experienced the most disruption in their assumptive worlds.

The second hypothesis being tested was that mean scores on the WAS, PTGI, and Hope scale would differ according to time since diagnosis, age, gender, ethnicity, and sexual orientation. Because so little research has been conducted in this area, no real assumptions were made ahead of time about what the differences in scores would be. However, it was expected that the demographic variables would contribute significantly to differences in the scores on all three scales.

CHAPTER II

METHODOLOGY

Research Design

The present study used a descriptive design to examine the relation among assumptive world view, hope, and posttraumatic growth in persons living with HIV/AIDS. Additionally, the impact of time since diagnosis, age, gender, ethnicity, and sexual orientation on the assumptive world view, hope, and posttraumatic growth were examined.

Participants

The sample consisted of 43 participants (36 males, 5 females, and 2 transgendered). The majority of the participants were Caucasian (65.1%), followed by African American (18.6%), Hispanic (14%), and Native American (2.3%). Participants were divided into five categories according to age and the breakdown was as follows: five were 18-29 years (11.6%), nineteen were 30-39 years (44.2%), fifteen were 40-49 years (34.9%), three were 50-59 years (3%), and one was 60-69 years (2.3%). Participants were categorized according to sexual orientation with the majority of individuals being homosexual (65.1%), followed by heterosexual (27.9%), and bisexual (7%). All of the study participants were HIV+ and ranged in time since diagnosis from a couple of months to twenty years (eighteen 0-5 years, three 6-10 years, eighteen 11-15 years, four 16-20 years)—See Table 1. Participants were contacted through local HIV support groups, medical clinics and doctors, and other facilities providing services to persons with HIV/AIDS. Approximately 200 packets were distributed within the various agencies.

Table 1

Demographic Characteristics

Variable	N	Percentage
Gender		
Male	36	83.7
Female	5	11.6
Transgender	2	4.7
Ethnicity		
Caucasian	28	65.1
Hispanic	6	14.0
African American	8	18.6
Native American	1	2.3
Sexual Orientation		
Homosexual	30	69.8
Heterosexual	10	23.3
Bisexual	3	7.0
Age		
18-29	4	9.3
30-39	21	48.8
40-49	14	32.6
50-59	3	7.0
60-69	1	2.3
Time Since Diagnosis		
0-5 years	18	41.9
6-10 years	4	9.3
11-15 years	16	37.2
16-20 years	5	11.6

Procedures

Directors of counseling and treatment centers, medical clinics, and dental clinics in Houston were contacted by phone to obtain support and cooperation with the study. Once the study was introduced to these individuals, a meeting was set up to provide further information about the purpose of the study. A uniform explanation was provided

to everyone involved in order to minimize discrepancies in the descriptions of the study to prospective participants. Packets containing all instruments being used in the study**,** a cover letter explaining the purpose of the study, an informed consent form, and a list of counseling resources were left with all agencies/clinics willing to ask their members/patients to participate in the study. Participants were informed that all information provided was anonymous and that a self-addressed stamped envelope was provided for them to return all materials.

Instruments

Demographic Questionnaire – The participants were asked to fill out a demographic questionnaire providing information regarding: age, gender, time since diagnosis, ethnicity, HIV medications being taken, opportunistic infections, employment status, attendance of support groups and/or counseling.

World Assumptions Scale (WAS) – The WAS (Janoff-Bulman, 1989) is a 32-item self-report measure designed to assess a person's assumptive world. The WAS consists of three main categories of assumptions: the benevolence of the world, the meaningfulness of the world, and the worthiness of the self. The main scales are then broken down into subscales representing more specific beliefs such that Benevolence of the World consists of two 4-item scales tapping the benevolence of the impersonal world and the benevolence of people; each subscale of the Meaning scale is represented by a 4-item scale considering a person's beliefs in justice, control, and randomness; and Self-Worth is comprised of three 4-item subscales tapping beliefs about self-esteem, personal control, and luck. The items are rated according to the extent that the participants agrees with

items on a 6-point scale, with endpoints “strongly disagree” and “strongly agree.” Reliabilities for the eight 4-item subscales range from .66 to .78.

Posttraumatic Growth Inventory (PTGI): A validated instrument that can be used to assess posttraumatic growth in the five domains (New Possibilities, Relating to Others, Personal Strength, Appreciation of Life, and Spiritual Change). It contains 21 items measured on a Likert scale and was developed to measure positive outcomes of trauma (Tedeschi and Calhoun, 1996).

Adult State Hope Scale: The State Hope Scale is made up of three pathway and three agency questions derived from the dispositional Hope Scale and intended to reflect the present tense. The scale has high internal reliability (coefficient alphas in the .90s) and modest test-retest coefficients (.50s to .90s). The construct validity is acceptable and the scale shows concurrent and discriminant validity in relation to other state self-report indices (Snyder, Cheavens, and Michael, 1999).

Analysis

Hypothesis 1: Scores on the PTGI will significantly positively correlate with scores on the State Hope Scale and negatively correlate with scores on the WAS.

PTGI, WAS, and Adult State Hope Scale are likert scales with higher scores indicating greater endorsement of each construct. Descriptive statistics were run on all of the total scores in order to examine trends among the participants and differences from the norms. The Pearson Product-Moment Correlation was run to examine the relation among scores on the WAS, PTGI and Hope scales.

Hypothesis 2: Mean scores on the WAS, PTGI, and Hope scale would differ according to time since diagnosis, age, gender, ethnicity, and sexual orientation.

The demographic variables and total scores on the WAS, PTGI and State Hope Scales are continuous variables. The General Linear Model was run for each of the scales to examine differences in mean scores according to time since diagnosis, gender, age, ethnicity, and sexual orientation. The dependent variables were total scores on the WAS, PTGI and Hope scales, and the independent variables were time since diagnosis, age, gender, ethnicity, and sexual orientation.

CHAPTER III

RESULTS

Initially, descriptive statistics were run to examine the data and identify any trends in endorsement of assumptive world view, hope, and posttraumatic growth. Higher scores indicated greater endorsement of the concepts measured by each scale. The mean score for assumptive world view was 127.20 with a standard deviation of 19.86. For hope, the mean score was 31.91 with a standard deviation of 9.92. The mean score on the posttraumatic growth scale was 65.21 and the standard deviation was 19.55—See Table 2. Mean scores for this sample were slightly lower than the norms reported for each of the instruments.

Table 2

Mean, Standard Deviation, and Range of Scores for Assumptive World View (AWV), Hope, and Posttraumatic Growth (PTG)

Variable	N	M	SD	Maximum	Minimum
AWV	43	127.16	19.86	133	121
Hope	43	31.91	9.92	34.96	28.85
PTG	43	65.21	19.55	71.23	59.19

Note: Higher scores on AWV, Hope, and PTG indicate greater endorsement of these variables.

Hypothesis 1: Scores on the PTGI would positively correlate with scores on the State Hope Scale and negatively correlate with scores on the WAS.

The Pearson Product Moment Correlation was run to examine the relation among total scores on each of the categories. A p-value of less than .05 was required for significance. Analysis revealed a significant positive correlation between assumptive world view and hope (r =.624, sig. < .01)—See table 3**.** Although scores on the Posttraumatic Growth Inventory were positively correlated with scores on the World Assumptions Scale (r = .204, p = .189) and the State Hope Scale (r = .108, p = .492), the relations were not significant. In general, the results contradicted expectations with positive relations existing among scores on all three scales.

Table 3

Correlations between Assumptive World View (AWV), Hope, and Posttraumatic Growth (PTG)

Correlations		AWV	Hope	PTG
AWV	Pearson Correlation	1	.624**	.204
	Significance (2-tailed)		.000	.189
	N	43	43	43
Hope	Pearson Correlation	.624**	1	.108
	Significance (2-tailed)	.000		.492
	N	43	43	43
PTG	Pearson Correlation	.204	.108	1
	Significance (2-tailed)	.189	.492	
	N	43	43	43

**Correlation is significant at the 0.01 level (2-tailed)

Hypothesis 2: Mean scores on the WAS, PTGI, and Hope scale would differ according to time since diagnosis, age, gender, and sexual orientation.

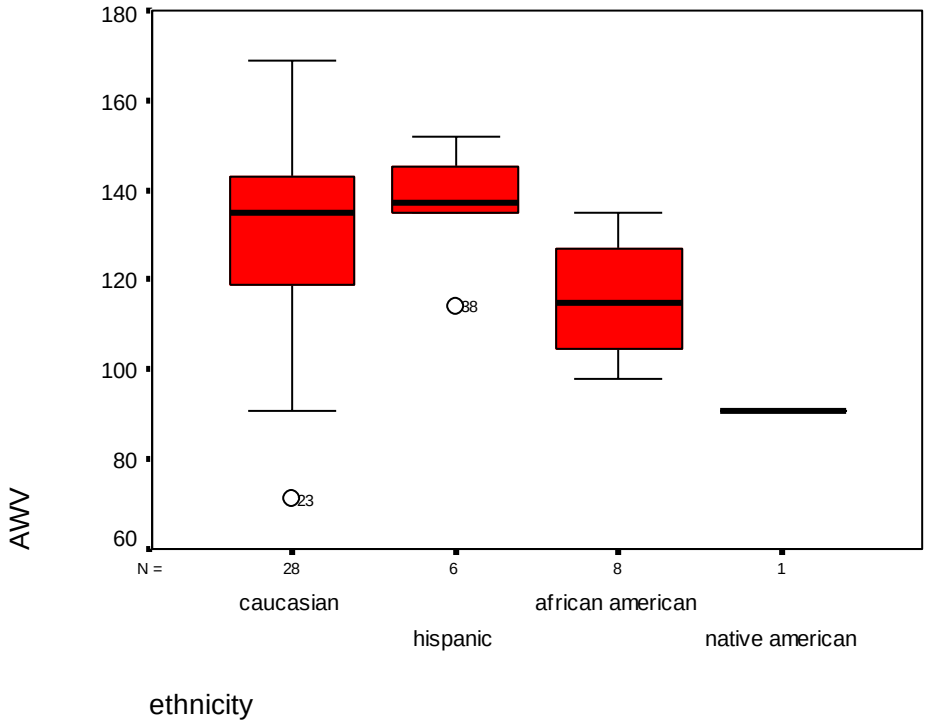
A general linear model was conducted to evaluate the effects of gender, age, ethnicity, time since diagnosis, and sexual orientation on assumptive world view, hope, and posttraumatic growth. The dependent variables were assumptive world view as measured by the World Assumptions Scale, hope as measured by the State Hope Scale, and posttraumatic growth as measured by the Posttraumatic Growth Inventory. The independent variables were gender, age, ethnicity, time since diagnosis, and sexual orientation. Age and time since diagnosis are continuous variables, whereas, gender, ethnicity, and sexual orientation are nominal variables with three levels each. The three levels of gender were male, female, and transgender. Ethnicity included: African American, Hispanic, and Caucasian. Because only one person fell into the Native American category, they were not included in the final analysis. Sexual orientation also included three levels: heterosexual, homosexual, and bisexual.

An analysis of variance revealed no main effect of time since diagnosis (F (3) = .067, p = .977), age F (2) = .126, p = .883), gender (F (2) = .875, p = .429), or sexual orientation (F (2) = .260, p = .773) for assumptive world view. The effect of ethnicity on assumptive world view was significant at the .05 level (F (2) = 3.595, p = .037), with Caucasian and Hispanic participants scoring higher on the World Assumptions Scale than African American participants.

Follow up tests were conducted to compare pairwise differences among the means using the Bonferroni method. There were significant differences in the mean scores on the WAS between Caucasian and African American participants and between Hispanic

and African American participants, but no significant differences between the Caucasian and Hispanic groups. Caucasian and Hispanic participants scored significantly higher on the World Assumptions Scale than African American participants—See Figure 1.

Figure 1



An analysis of variance revealed no main effect of time since diagnosis (F (3) = .526, p = .668), age F (2) = .030, p = .971), gender (F (2) = .353, p = .706), ethnicity (F (2) = 2.242, p = .119) or sexual orientation (F (2) = .334, p = .719) for hope. No significant two-way or three-way interactions were found.

An analysis of variance revealed no main effect of time since diagnosis (F (3) = 1.098, p = .368), age F (2) = .522, p = .600), gender (F (2) = .702, p = .505), ethnicity (F (2) = .718, p = .494), or sexual orientation (F (2) = 2.767, p = .082) for posttraumatic growth. No significant two-way or three-way interactions were found.

CHAPTER IV

DISCUSSION

The purpose of this study was to examine the complicated relation among assumptive world view, hope, and posttraumatic growth in individuals living with HIV/AIDS. The study was designed not only to look at differences in scores on the three scales but also to gain a better understanding of differences on these three variables according to time since diagnosis, age, gender, ethnicity, and sexual orientation. Because a breakdown or shattering of one's belief system is believed to be part of the growth process following trauma, expectations were that the participants in the study who experienced the greatest growth would also be those with less positive world views. Additionally, it was thought that the demographic variables would contribute significantly to differences in the scores on the three scales.

It has been repeated throughout the paper that the issues being studied here are complex and complicated, and the results support that notion. This study provides an initial peek into the traumatic experience of being diagnosed with and living with HIV/AIDS, but is clearly just the beginning. With each question answered, a new one arises. The remainder of the paper will discuss the results and possible explanations for the findings, review the limitations of the study, and provide the reader with direction for continuing this important line of study.

Overall scores on the three scales were lower than norms reported for each scale. Lower scores may be attributable to the unique characteristics and challenges of living with HIV/AIDS as living with a terminal illness is an ongoing battle with losses throughout the process. However, the scores may have been deflated in this population

prior to receiving an HIV diagnosis and may have little to do with the disease itself. Although HIV/AIDS impacts persons from all walks of life, it has had the most devastating impact on already-stigmatized groups such as those in the gay community and IV drug users. Being a part of a group frequently shamed by its membership may contribute to the lower scores found in this study.

Scores on all three scales positively correlated with each other, with the relation between hope and assumptive world view being significant. In other words, participants with a more positive assumptive world view also had higher levels of hope and vice versa. This finding was somewhat contradictory to expectations going into the study but not completely surprising. Part of the process of growing following trauma and experiencing hope after crisis involves the dismantling or breakdown of one's assumptive world view. Survivors frequently experience a more negative view of the world, themselves, and others following trauma. Initially, it was thought that participants who had experienced growth following their diagnosis would also have a more negative assumptive world view as the breakdown of the previously held world view is necessary for growth. However, it appears that the variables may be more closely and intricately connected than had been previously thought with scores on each scale complimenting, rather than contradicting, each other**.**

In addition, the impact of the demographic variables on assumptive world view, hope, and posttraumatic growth did not yield expected results and appears even more complicated than initially thought. The findings of the study did not support the hypothesis that scores on the three scales would differ according to time since diagnosis, age, gender, and sexual orientation. It was expected that those who had been living with

HIV/AIDS for longer would have had longer to ruminate on the experience, grieve the losses, and establish new ways of achieving goals, as well as increased psychological growth through the process. One explanation for the lack of support for this expectation is the natural progression of the disease. Those who have had longer since diagnosis may have experienced greater growth through the process, but may also be dealing with greater deterioration in their health and more loss of friends and loved ones to the disease, leading to a decrease in scores.

Similarly, the age of participants may not have been an uncomplicated variable to explore. In general, younger participants have lived with HIV/AIDS for a shorter period of time than older participants. They have also come to know the disease at a time when it is more manageable than was once the case. Although the diagnosis may have been more recent, it also may have been less disruptive to their world views. Additionally, the struggles at different stages of the disease could have lead to similar scores among various groups of participants on the scales used in the study. In other words, younger and more newly diagnosed participants may have more hope for their future but may also be dealing with the realization that HIV/AIDS is still a highly stigmatized condition. Older participants, who were diagnosed years ago, may have worked through the sense of loss and alienation brought on by HIV/AIDS but are currently facing severe limitations ultimately arising from the disease.

Interestingly, significant differences in scores on the World Assumptions Scale were found for ethnicity, with Caucasian and Hispanic participants having a more positive assumptive world view than African American participants. Although the differences may be attributed directly to ethnicity, another possible influence on scores is

support, or lack thereof. The majority of African American participants (55%) were those living in housing facilities for HIV infected individuals and were not receiving psychological or emotional support related to the disease, whereas the Hispanic and Caucasian participants were recruited primarily from a support group. The support received by certain participants may have influenced scores as much as race.

An important question arises from this last finding. Why did ethnicity impact scores on the World Assumptions Scale and not scores on the other two scales? If scores on the three scales are positively correlated, it would follow that the African American participants would score lower on all three scales than the Hispanic and Caucasian participants, but this was not the case. Further exploration is necessary to better understand the role of race on assumptive world view, hope, and posttraumatic growth.

Limitations and Future Directions

The current study provided a necessary first step in understanding the coping process of persons living with HIV/AIDS but was not without its limitations. An important shortcoming of the study is the lack of longitudinal data available. It is difficult to accurately evaluate the impact of a trauma such as an HIV diagnosis on assumptive world view, hope, and posttraumatic growth without information regarding previous scores. It is possible participants scores on the scales were the same prior to diagnosis as they were afterward, with little impact experienced upon learning of their HIV status. By having a baseline prior to diagnosis, researchers could better assess the true impact of the trauma on the individuals.

Due to the difficulty in identifying a group of individuals who are HIV- and will become HIV+, a longitudinal study could watch the coping process of newly diagnosed

persons over a 10-year period of time. Collecting scores from participants at various points throughout the 10 years would give researchers valuable information about the ups and downs of coming to terms with, growing, and finding hope following a trauma. Such a study would benefit from a more in-depth examination of the impact of support, socioeconomic status, and the possible diminishing lifestyle brought about by HIV on the coping process of those infected.

Another limitation in this study comes from the small and somewhat biased sample. Many of the participants were those who had sought assistance in dealing with the disease and were actively taking steps toward growing through the loss brought on by HIV/AIDS. Those who were not involved in support groups had unique living environment that may have also contributed to their current outlook, as these participants were without the ability to afford housing and were living in a government-provided facility solely with other HIV+ individuals. Very little response was received from medical clinics, which may have provided more diversity in the sample and a more comprehensive understanding of the impact HIV diagnosis has on different populations. Researchers in the future might get better response by providing incentives to those who participate or gaining more support from physicians working with HIV+ individuals.

The current study provides valuable insight into the coping process of HIV+ persons and can provide a preliminary understanding of this experience to those mental health professionals working with this population, as well as infected persons coming to terms with their diagnosis. First of all, mental health professionals can learn from this study just how complex the experience of living with HIV/AIDS really is for their infected patients. Second, it is critical to view each person's response to diagnosis and

the subsequent losses brought about by the disease as unique, allowing the patient to inform the therapist of his personal experience with this trauma. Finally, mental health professionals can best serve this population by understanding that growth and hope may take time to achieve or reestablish and their patients need the time and space to grieve the losses as they rebuild their belief systems.

The multifaceted nature of the issues studied here is apparent after reviewing the initial findings, and it is evident just how much is left to be learned. Future research would benefit from a longitudinal study examining changes in assumptive world view, hope, and posttraumatic growth over time. A qualitative design would allow researchers to gain a more in-depth understanding of the coping process of this population. Additionally further examination of the impact of factors such as disclosure, shame, and stigma on response to diagnosis would provide researchers and practitioners with important information about the complex response to living with HIV/AIDS. The current study provides a good first step in understanding this process, but also raises many questions and issues to be examined down the road.

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APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

1) How old are you?

2) What is your ethnicity?

3) What is your sexual orientation?

4) When were you diagnosed with HIV?

5) Have you received an AIDS diagnosis? If yes, when?

6) Have you ever had an opportunistic infection?

7) Do you attend any HIV/AIDS support groups?

8) Are you seeing a therapist?

9) Are you employed?

10) Are you receiving disability benefits because of HIV/AIDS?

11) What is your gender?

APPENDIX B

WORLD ASSUMPTIONS SCALE

WORLD ASSUMPTIONS SCALE

Using the scale below, please select the number that indicates how much you agree or disagree with each statement. Please answer honestly. Thanks.

1 = strongly disagree
2 = moderately disagree
3 = slightly disagree
4 = slightly agree
5 = moderately agree
6 = strongly agree

1. Misfortune is least likely to strike worthy, decent people.
2. People are naturally unfriendly and unkind.*
3. Bad events are distributed to people at random.*
4. Human nature is basically good.
5. The good things that happen in this world far outnumber the bad.
6. The course of our lives is largely determined by chance.*
7. Generally, people deserve what they get in this world.
8. I often think I am no good at all.*
9. There is more good than evil in the world.
10. I am basically a lucky person.
11. People's misfortunes result from mistakes they have made.
12. People don't really care what happens to the next person.*
13. I usually behave in ways that are likely to maximize good results for me.
14. People will experience good fortune if they themselves are good.
15. Life is too full of uncertainties that are determined by chance.*
16. When I think about it, I consider myself very lucky.
17. I almost always make an effort to prevent bad things from happening to me.

18. I have a low opinion of myself.*

19. By and large, good people get what they deserve in this world.

20. Through our actions we can prevent bad things from happening to us.

21. Looking at my life, I realize that chance events have worked out well for me.

22. If people took preventive actions, most misfortune could be avoided.

23. I take the actions necessary to protect myself against misfortune.

24. In general, life is mostly a gamble.*

25. The world is a good place.

26. People are basically kind and helpful.

27. I usually behave so as to bring about the greatest good for me.

28. I am very satisfied with the kind of person I am.

29. When bad things happen, it is typically because people have not taken the necessary actions to protect themselves.

30. If you look closely enough, you will see that the world is full of goodness.

31. I have reason to be ashamed of my personal character.*

32. I am luckier than most people.

* reverse score

Scoring:

Reverse score the asterisked statements and then sum the responses for each of the three subscales, as indicated below.

Benevolence of the World: Statements 2+4+5+9+12+25+26+30

Meaningfulness of the World: Statements
1+3+6+7+11+14+15+19+20+22+24+29

Self-Worth: Statements 8+10+13+16+17+18+21+23+27+28+31+32

APPENDIX C

ADULT STATE HOPE (GOALS) SCALE

THE GOALS SCALE

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

1=Definitely False 2=Mostly False 3=Somewhat False 4=Slightly False 5=Slightly True 6=Somewhat True 7=Mostly True 8=Definitely True

___1. I can think of many ways to get out of a jam.

___2. I energetically pursue my goals.

___3. I feel tired most of the time.

___4. There are lots of ways around any problem.

___5. I am easily downed in an argument.

___6. I can think of many ways to get the things in life that are most important to me.

___7. I worry about my health.

___8. Even when others get discouraged, I know I can find a way to solve the problem.

___9. My past experiences have prepared me well for my future.

___10. I've been pretty successful in life.

___11. I usually find myself worrying about something.

___12. I meet the goals that I set for myself.

APPENDIX D

POSTTRAUMATIC GROWTH INVENTORY

POSTTRAUMATIC GROWTH INVENTORY

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your crisis, using the following scale.

0= I did not experience this change as a result of my crisis.
1= I experienced this change to a very small degree as a result of my crisis.
2= I experienced this change to a small degree as a result of my crisis.
3= I experienced this change to a moderate degree as a result of my crisis.
4= I experienced this change to a great degree as a result of my crisis.
5= I experienced this change to a very great degree as a result of my crisis.

1. I changed my priorities about what is important in life. _____

2. I have a greater appreciation for the value of my own life. _____

3. I developed new interests. _____

4. I have a greater feeling of self-reliance. _____

5. I have a better understanding of spiritual matters. _____

6. I more clearly see that I can count on people in times of trouble. _____

7. I established a new path for my life. _____

8. I have a greater sense of closeness with others. _____

9. I am more willing to express my emotions. _____

10. I know better that I can handle difficulties. _____

11. I am able to do better things with my life. _____

12. I am better able to accept the way things work out. _____

13. I can better appreciate each day. _____

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

15. I have more compassion for others. _____

16. I put more effort into my relationships. _____

17. I am more likely to try to change things which need changing. _____

18. I have a stronger religious faith. _____

19. I discovered that I'm stronger than I thought I was. _____

20. I learned a great deal about how wonderful people are. _____

21. I better accept needing others. _____