Published in final edited form as:

Int Rev Psychiatry. 2009 December ; 21(6): 570–579. doi:10.3109/09540260903344107.

Post-traumatic growth and spirituality in burn recovery

SHELLEY WIECHMAN ASKAY¹ and GINA MAGYAR-RUSSELL²

¹ Department of Rehabilitation Medicine, University of Washington, School of Medicine, Seattle, Washington, USA

² Loyola College in Maryland, Department of Pastoral Counseling, Johns Hopkins School of Medicine, Department of Psychiatry, Baltimore, Maryland, USA

Abstract

For decades, research on long-term adjustment to burn injuries has adopted a deficit model of focusing solely on negative emotions. The presence of positive emotion and the experience of growth in the aftermath of a trauma have been virtually ignored in this field. Researchers and clinicians of other health and trauma populations have frequently observed that, following a trauma, there were positive emotions and growth. This growth occurs in areas such as a greater appreciation of life and changed priorities; warmer, more intimate relations with others; a greater sense of personal strength, recognition of new possibilities, and spiritual development. In addition, surveys of trauma survivors report that spiritual or religious beliefs played an important part in their recovery and they wished more healthcare providers were comfortable talking about these issues. Further evidence suggests that trauma survivors who rely on spiritual or religious beliefs for coping may show a greater ability for post-traumatic growth (PTG). This article reviews the literature on these two constructs as it relates to burn survivors. We also provide recommendations for clinicians on how to create an environment that fosters PTG and encourages patients to explore their spiritual and religious beliefs in the context of the trauma.

Introduction

The lifetime prevalence of experiencing a major stressful life event, including a significant loss, catastrophe or major illness is high. Tedeschi & colleagues (Tedeschi, Park, & Calhoun, 1998) found that 21% of a sample of adults in south-eastern USA reported a traumatic event during the previous year and 69% reported the occurrence of at least one traumatic event in their lifetimes (Norris, 1992). The majority of people who experience stressful or traumatic life events do not develop long-term distress, and in fact, report a return to their baseline level of functioning, and even report growth in the face of adversity (Bonnano, 2004; Park, 1999).

In 1964, Caplan (1964) first alluded to the potential for growth or ‘thriving’ in the face of adversity. Patterson and colleagues (1993) first drew attention to the potential for positive

Correspondence: Shelley Wiechman Askay, PhD, Department of Rehabilitation Medicine, Harborview Medical Center, 325 Ninth Ave, Box 359740, Seattle, WA 98104, USA. Tel: (206) 744-4439. Fax: (206) 744-8580. wiechman@u.washington.edu.

Declaration of interest: The authors have no competing interests or relevant potential conflicts of interest to disclose.

growth in the face of a burn injury in their 1993 review of emotional reactions following burns. Research on growth after a trauma has occurred in other medical populations, including cancer (Cordova, Cunningham, Carlson, & Andrykowski, 2001; Luszczynska, Mohamed, & Schwarzer, 2005), HIV (Milam, 2004), heart disease (Sheikh, 2004) and multiple sclerosis (Pakenham, 2005). Yet most researchers and clinicians in the field of trauma and illness continue to focus on the deficit model of adversity as a response to trauma. In their review, Linley and Joseph (2004) caution that focusing only on the negative consequences following a trauma leads to a biased view of post-traumatic reactions and can inadvertently 'cheat' patients out of hope of making a meaningful recovery. Although it is important to study distress and negative affect following a trauma, it is equally important to study positive emotions and growth. Standardized measures need to include questions of positive, as well as negative emotions. Most interventions for post-traumatic stress disorder (PTSD) and depression do not take into account the potential for post-traumatic growth (PTG).

Two recent empirical reviews have been published on positive change following adversity (Linley & Joseph, 2004; Zoellner & Maercker, 2006). The current discussion will include PTG and its correlates as described in those reviews, as well as results from a study looking at growth after a burn injury. This discussion will also describe measurement issues and make recommendations for future investigations of PTG and related constructs. On a more clinical level, we will describe some specific means by which a therapist can create an atmosphere for growth. Finally, because religious and spiritual beliefs and practices show strong associations with growth after a trauma, we conclude with a discussion of religion and spirituality and its role in burn recovery.

Definition of terms

PTG was defined by Tedeschi & Calhoun (Calhoun & Tedeschi, 1999; Tedeschi & Calhoun, 1995) as a positive psychological change experienced as a result of struggling with highly challenging life circumstances. Other terms have been used to refer to similar concepts of positive psychology, including adversarial growth, benefit finding, optimism, hardiness and resiliency. The term PTG will be used throughout this manuscript. Tedeschi & Calhoun (1996) have identified five forms of PTG. These include a greater appreciation of life and changed priorities; warmer, more intimate relations with others; a greater sense of personal strength; recognition of new possibilities; and spiritual development.

Review of Literature

As mentioned earlier, PTG has been studied in several populations, including political imprisonment and torture (Fontana & Rosenheck, 1998), and sexual assault survivors (Frazier, Conlon, & Glaser, 2001). In recent years there has been a focus on health populations, such as those diagnosed with cancer (Cordova et al., 2001; Luszczynska et al., 2005), HIV (Milam, 2004), multiple sclerosis (Pakenham, 2005) and heart disease (Sheikh, 2004). We found only one study that looked at PTG following burn injuries. Rosenbach & Renneberg (2008) looked at PTG in burn patients at time of discharge and attempted to identify correlates facilitating or preventing PTG. Their sample included 149 adults who had

been discharged from the burn centre at least three months prior to the study. They were sent self-report questionnaires that included the PTG Inventory (PTGI), and other inventories assessing coping, social support, health-related quality of life and psychological distress. Fifty-seven percent of their sample was male and the mean percentage of total body surface area (TBSA) with a burn was 32%. Percentage of TBSA was used as an indicator of injury severity. People whose TBSA was greater than 30% constituted the higher injury severity group in contrast to those whose TBSA was less than 30% in the lower injury severity group. An active coping style, social support, and female gender were the strongest predictors of PTG. The severity of injury, the absence of distress, and quality of life were not found to be associated with PTG. In fact, this study confirmed the findings of other studies that PTG and distress can co-occur. Their sample experienced a high degree of PTG as a whole, yet also reported high levels of distress and lower quality of life. In general, participants in this study showed the most PTG in a greater appreciation of life, enhancement of personal relationships, and a greater sense of personal strength.

Correlations with PTG

Researchers have attempted to identify underlying similarities in those most likely to experience growth following a trauma. Reviews by Linley & Joseph (2004) and Zoellner & Maercker (2006) have found the following associations.

Characteristics of the event

There is a curvilinear relationship between the levels of perceived threat and harm. Benefits are stronger at intermediate levels. Specifically, the trauma needs to be significant enough to have an impact on their world view, but not so devastating that they cannot process it or recover from it (Fontana & Rosenheck, 1998; Schnurr, Rosenberg, & Friedman, 1993). The subjective experience of the event, such as perceived helplessness during the event and perceived controllability of the event, rather than the event itself, seem to have more of an influence on PTG than objective descriptors (Linley & Joseph, 2004).

Demographic variables

The literature on gender has yielded mixed results, but most studies show that women have a tendency to experience more PTG than men (Park, Cohen, & Murch, 1996; Tedeschi & Calhoun, 1996; Weiss, 2002). Younger people are also more likely to experience PTG, once adolescence is achieved (Milam, Ritt-Olson, & Unger, 2004). Higher levels of education and at least a moderate income level is also predictive of PTG (Updegraff, Taylor, Kemeny, & Wyatt, 2002).

Personality traits

Personality traits such as extraversion, openness, agreeableness and conscientiousness are all more positively correlated with PTG (Linley & Joseph, 2004). Certain personality variables, including hardiness and optimism may trigger PTG. Resiliency has been identified as a key trait in attaining PTG. Resiliency is defined as the ability to bounce back from negative emotional experiences; that is, flexible adaptation to the changing demands of stressful experiences (Block & Block, 1980; Lazarus & Folkman, 1984). Resilient people tend to be

optimistic, energetic and curious, open to new experiences, show high levels of positive emotions, and elicit positive emotions through humour and relaxation. Some argue that resilient individuals maintain a relatively stable level of functioning with only transient experiences of distress after trauma (Bonnano, 2004). It is important to note that PTG and resilience are distinct constructs. Resilience seems to be a predictor of PTG, but it is not a necessary characteristic.

Coping

Active ways of managing distress such as problem-focused coping and reinterpretation are consistently found to be correlated with PTG. People who rely on religious coping (e.g., attending religious gatherings, having intrinsic spiritual beliefs), are also more likely to report PTG. Social support is not consistently associated with growth. This is likely due to researchers' failure in distinguishing between positive social support and negative social support. Positive social support and emotional social support are more likely to create conditions where growth can occur (Linley & Joseph, 2004). Spiritual coping can be particularly helpful for those involved with a religious community or organized group (Calhoun & Tedeschi, 1999). The social support that they receive from others who share similar beliefs is quite helpful in the face of a trauma. Spiritual beliefs can also help an individual restructure their worldview in a way that makes sense to them.

It is generally believed that acceptance coping leads to better outcomes in situations where the person has no control over the stressful event (Folkman & Lazarus, 1980). Acceptance also seems to be important for PTG as well. Park et al. (1996), showed that those who could accept that the traumatic event happened and that it cannot be changed, were more likely to show PTG. This coping style allows people to focus their energy on controllable aspects of the stressful event rather than wasting energy. This seems particularly important for those recovering from a burn injury. Once a patient can accept that the burn injury occurred, they can use a more problem-focused active way of coping throughout the long rehabilitation process.

Cognitive processing and psychological distress

Insight and cognitive processing are crucial in being able to experience PTG (Calhoun & Tedeschi, 1998). Cognitive processing that focuses on an individual's struggle to make sense of the trauma and the creation of a new worldview is necessary for PTG to occur (Calhoun & Tedeschi, 1998). This process can be aided by spiritual coping (as described above). It is important to distinguish PTG from PTSD. PTSD is a psychiatric condition where distressing aspects of the event are re-experienced, reminders of the event are avoided, and, the person remains in a guarded state – all of which interferes with daily functioning. It is important to note that PTG can occur in the presence of PTSD as the two are separate constructs.

Results are mixed regarding the relationship between PTG and psychological distress. Certainly, PTG and distress can co-exist. In fact, some studies have shown that distress is necessary for PTG to occur (Linley & Joseph, 2004). Several studies have found that the quality of cognitive processing determines distress level, for example, there is an important

distinction between rumination and purposeful thinking (Calhoun & Tedeschi, 1998; Janoff-Bullman, 1992). Researchers hypothesize that there is a 'critical point' for this cognitive processing and purposeful thinking to occur. One cannot engage in purposeful thinking when their distress is overwhelmingly high (e.g., immediately after the trauma) and that some people need time to manage distress before they can experience PTG. Several studies have shown that those who experienced distress following the trauma were more likely to report PTG at a later time-point than those who did not experience distress.

According to the review by Linley & Joseph (2004), the literature relating depression with PTG is also mixed. In general, depression is not associated with PTG. Once again, indicating that they are two distinct constructs and can co-exist. When significant associations were found, it was in the negative direction with those reporting higher depression scores being less likely to experience PTG. It may be that if people are too distressed they cannot process the event in a way that leads to PTG.

As for the passage of time, Linley & Joseph (2004) concluded that passage of time is less important in determining whether PTG occurs than what happens during that time. For example, if patients are able to positively reinterpret the trauma, can experience positive affect, have good social support, then they are more likely to report PTG in the months following the injury. However, PTG remains relatively stable after about six months post-trauma (Frazier et al., 2001). Longitudinal studies (Davis, Nolen-Hoeksema, & Larson, 1998; Frazier et al., 2001; McMillen, Smith, & Fisher, 1997) showed that people who were able to find benefits after a trauma showed a decrease in psychological distress over time, whereas in those who did not perceive benefits, their psychological distress increased over time.

Notably, individuals reporting PTG, relative to those not reporting PTG, do not necessarily report a better quality of life or reduced levels of distress. Thus far, research has shown that growth and distress are independent constructs and can be experienced simultaneously. It has been suggested that, while alleviating distress may not lead to growth, growth may protect one from distress, or, that growth may be related to lower levels of distress in the years following the trauma (Frazier et al., 2001). This calls into question the utility of even studying or striving to achieve PTG. That is, is it even necessary or important to study PTG if it is not related to an improved quality of life? Most feel that the study of PTG is useful but that there are problems in measuring PTG and in understanding the relationship between distress, PTG and quality of life. Human nature is quite complex and cannot easily be quantified. The hope is that with more research, better measures can be developed and lead to greater clarity in understanding these complex factors.

In summary, more research is needed to identify reliable predictors of PTG. Since a range of associations between growth and distress occur, we can conclude that they are two separate constructs. While it appears that decreasing distress does not necessarily promote PTG, the experience of growth may act to alleviate distress in the long term and lead to better adjustment and a better quality of life. In general, empirical data show that PTG is associated with a greater impact of the trauma, and with experiencing more positive

emotions. Additionally, the presence of religiosity and optimism may create conditions that are conducive to PTG.

Interventions to foster PTG

Although empirical knowledge in this area is limited, we recommend that clinicians create an environment that can foster PTG. Ways of promoting PTG include teaching effective coping strategies and stress management, encouraging emotional expression, enhancing social support, and improving hope, positive self-image and self-care. However, it is crucial that clinicians do not attempt to rush this process. PTG must not be explored too soon after the trauma and must be led by the patient. Clinicians' attempts at suggesting any form of PTG may be perceived as minimizing the patient's experiences. Clinicians must wait until the client mentions positive changes and then offer gentle reflections. They must also be comfortable in allowing the patient to struggle with the event (Calhoun & Tedeschi, 1999).

In seeking to promote PTG it is important to note that the first priorities are to ensure safety and stabilize distress. For example, patients need education if they perceive themselves as still in danger after the trauma has ended (e.g., painful daily dressing changes may seem threatening), they may need help meeting basic needs (i.e., food, clothing, shelter) or in returning to key roles in life (e.g., provider, worker) that can be impaired by injury-related PTSD symptoms. In addition, meaningful social support connections must be renewed or re-established. There needs to be a safe place for the patient to rebuild and restructure assumptions of the world. The use of narrative to disclose and describe the event to others in a meaningful way can foster this process (Calhoun & Tedeschi, 1999). Effectively utilizing an individual's religion and spirituality to foster PTG will be discussed below (religion and spirituality section).

Future research

The exploration of PTG seeks to address a question that has been present through the ages in religion and philosophy: 'Can suffering lead to strengthening and growth?' Although researchers and clinicians have worked on understanding this for several decades, many survivors of trauma spontaneously achieve growth after a major stressful life event. The potential for growth after a trauma can help maintain the human spirit and promote the incredible resiliency of human nature. The literature above shows that growth can occur following a spectrum of life crisis, including burn injuries. Patients have often told us that although they wish their burn had not occurred, they were ultimately able to utilize the experience to become stronger or to realize a potential that they did not know they had, or, that the process of recovery has become a source of pride.

There are several priorities that future research on burns and PTG need to address. First, standardized measures on PTG need to be developed and used that allow for both positive and negative responses. Several measures have been published that claim to measure PTG. The most commonly used measure to study PTG in health and illness is Tedeschi & Calhoun's (Tedeschi & Calhoun, 1995, 1996) PTGI. The PTGI is a 21-item inventory with five subscales assessing the 5 identified core domains of PTG. Second, terms and definitions need to be clarified and agreed upon. For example, although related, resilience, PTG and

positive emotion are all different, non-interchangeable constructs. Further, more work needs to be done to understand how cognitive processing style relates to PTG, and to discern the circumstances and pathways that gender, ethnicity and cultural differences relate to PTG. There is very little work on temporal changes in PTG either by natural history or by intervention. Finally, research needs to be theory driven using bio-psychosocial models of burn outcomes that incorporate PTG (see Figure 1).

Religion and spirituality

Another often untapped resource for burn survivors is their religious and spiritual belief system. Similar to the psychological constructs of resiliency and PTG, the scientific study of religion and spirituality (R/S) has begun to flourish in recent years (Pargament, 2007). Investigators have produced strong evidence that R/S play important roles in quality of life (Miller, McConnel, & Klinger, 2007; O'Connor, Guilfoyle, Breen, Mukhardt, & Fisher, 2007) coping (Pargament, Van Haitsma, & Ensing, 1995), and search for meaning (Ardelt, Ai, & Eichenberger, 2008) following health crises and other major life events. In a recent survey of individuals hospitalized with burn injuries greater than 10% TBSA, 65% of patients surveyed indicated that they would like their physician to talk with them about religion and 75% wished to pray with their doctor (Arnoldo, Hunt, Burris, Wilkerson, & Purdue, 2006). Despite this strong endorsement by burn patients for integrating R/S into their care, there is a shortage of empirical data examining the role and impact that religion and spirituality may play in the lives of individuals recovering from burn injuries.

Defining religion and spirituality

Many clinicians neglect to assess or discuss the role of religion and spirituality in the lives of their patients because they feel unsure of how to talk about these issues, think they must have a personal religious or spiritual belief system in order to inquire about the spiritual lives of their patients, or simply aren't sure what is meant by the terms 'religion' and 'spirituality' (Astrow, Puchalski, & Sulmasy, 2001; Ellis, Campbell, Detwiler-Breidenbach, & Hubbard, 2002). Clinical work with R/S is limited by several factors including the scant knowledge of how to assess R/S in medical settings (Pulchaski, 2006), the great diversity of R/S beliefs (Astrow et al., 2001). Another hurdle is that there are a myriad of definitions of R/S depending on scientific discipline, theological perspective, and point in history (Hill et al., 2000; Zinnbauer, Pargament, & Scott, 1999). Pargament (1997) defines religion and spirituality in a manner that is broadly applicable to people from diverse belief systems: 'Religion is a search for significance in ways related to the sacred' (p. 32). Spirituality, in turn, is defined as 'the key function of religion – the search for the sacred' (p. 39), though he notes that people can pursue the sacred within or outside of traditional religious institutions.

Religion, from this perspective, is not a static set of beliefs or practices. It is instead a process in which discerning the sacred becomes a part of the pathway people take in identifying that which they hold significant. This process is complex, multiform, and individualized. Such dynamic and expansive definitions of religion and spirituality might help clinicians feel more confident in their own experience of this realm, and also their ability to ask patients about the role of this dimension of their lives. These definitions of R/S also bring to light how burn survivors' personal religious and spiritual beliefs and practices

may contribute to PTG. R/S may provide a framework to conserve aspects of themselves and the world that were not destroyed by their injury, as well as to transform significant destinations and pathways that enable the burn survivor to create meaning and accept necessary changes following trauma.

Religion and spirituality in coping with trauma

Among burn patients, religion and spirituality are most often discussed in case reports and anecdotes. These have reported the importance of personal R/S belief systems and how they have helped individuals deal with the trauma and rehabilitation process resulting from burn injury (Grossoehme & Springer, 1999; Sherrill & Larson, 1988). Case reports have shown some of the ways that individuals' R/S beliefs and practices impact medical treatment of burn injury (Budny, Regan, Riley, & Roberts, 1991; Kim, Slater, Goldfarb, & Hammell, 1993). Finally, case reports have described how health professionals' personal R/S plays a role in care of burn patients (Traughber, 1997). While these case reports are helpful and support the position that R/S belief systems can contribute to gaining a better understanding of burn injury, recovery, and treatment issues, empirical study of the role of R/S in the lives of burn patients is necessary to draw valid and generalized conclusions that will be useful in the clinical care of burn survivors.

To our knowledge, only one empirical study of the role of religion and spirituality in the recovery and coping process following burn injury has been published. Magyar-Russell and colleagues (2007) examined the prevalence of R/S coping and its impact on mental and physical functioning among burn survivors admitted to a regional burn centre in the mid-Atlantic region of the USA. Cross-sectional assessments were completed in hospital, and at one, six, twelve, and twenty-four months post-injury. Across all assessment points ($n = 87$), the sample was predominantly Christian (62%) and reported being 'moderately R/S' (57%). The use of positive religious coping was significantly greater than negative religious coping. During hospitalization positive religious coping was linked to better physical functioning. Negative religious coping was related to several adverse outcomes for survivors, including poor sleep and symptoms of post-traumatic stress six and twelve months post-injury, body image dissatisfaction six and twenty-four months post-injury, and poorer mental health functioning at six months post-injury. Additionally, at six months post-injury, hierarchical regression analyses revealed that after controlling for TBSA burned, age, gender and level of self-rated religiousness, negative religious coping contributed unique variance in predicting poorer mental health functioning, greater PTSD symptom severity, and greater body-image dissatisfaction. The results from this study suggest that burn survivors frequently engage in religious and spiritual forms of coping to manage the stress and trauma of their burn injury. Although positive religious coping is more commonly reported, negative religious coping is associated with greater psychological distress and physical impairment post-injury and therefore warrants further investigation and clinical attention.

Importantly, researchers have also found that R/S can play a significant and constructive role in individuals' attempts to cope with stressful medical events. For example, religion and spirituality have been shown to be particularly significant and valuable to medical patients of various ages who have undergone physical traumas, such as accidents, illness, and major

surgeries (Fitchett, Rybarczyk, DeMarco, & Nicholas, 1999; Koenig, McCullough, & Larson, 2001). In a study of former rehabilitation patients, the majority of the sample (74%) indicated that their spiritual beliefs were important to them (Anderson, Anderson, & Felsenthal, 1993). Among patients facing hospitalization, rehabilitation, and chronic health problems, R/S beliefs and practices have been directly associated with life satisfaction and quality of life (Riley et al., 1998), self-esteem (Harris et al., 1995), emotional well-being (Kim, Heinemann, Bode, Sliwa, & King, 2000) and functional outcomes (Fitchett et al., 1999; Pressman, Lyons, Larson, & Strain, 1990).

The manner in which R/S may be linked to growth following an assault to one's physical health is demonstrated in a sample of individuals diagnosed with cancer. Ardelt et al. (2008) found that R/S became more prevalent in meaning-making after the diagnosis of serious illness, and that R/S provided individuals with a sense of control, justification for their illness, and a source of emotional healing. Religious focus group members felt that they regained control over their lives by relinquishing control to God, that their illness had been a catalyst for personal and spiritual growth, and that their personal and spiritual growth led to emotional healing. Another promising area for research to better understand the role R/S plays following trauma points to religious orientation. In a recent review of the empirical evidence, Schaefer, Blazer, and Koenig (2008) conclude that intrinsic religious orientation may be a useful construct for measuring religiosity in the context of trauma: 'Persons with this orientation find their master motive in religion. Other needs, strong as they may be, are regarded as of less ultimate significance, and they are, so far as possible, brought into harmony with the religious beliefs and prescriptions... It is in this sense that he lives his religion' (p. 434) Allport and Ross (1967). Across a number of studies (see Schaefer et al., 2008) intrinsic religiosity was associated with lower severity of PTSD symptoms over time, but higher distress shortly after the trauma, and increased PTG eight months or more after trauma.

Thus, the empirical findings among a wide range of patient populations point to important associations between R/S and outcomes following trauma, and emphasizes the importance of considering both the positive and negative role that R/S may play in the recovery and coping process of acutely burn-injured patients.

Assessment of religion and spirituality

Case reports and preliminary data (Magyar-Russell et al., 2007) from burn patients support a more holistic approach to patient care, including at minimum, a brief patient-clinician discussion of R/S. Brief assessment could include the four questions suggested by the task force of the American College of Physicians (Arnoldo et al., 2006; Lo, Quill, & Tulskey, 1999; Post, Puchalski, & Larson, 2000):

1. Do you consider yourself spiritual or religious?
2. How important are these beliefs to you and do they influence how you care for yourself?
3. Do you belong to a spiritual community?
4. How might health care providers best address any needs in this area?

Asking these types of open ended or more ‘implicit’ R/S questions communicates openness to learning about the patient’s belief system, and is often more informative and therapeutic than administering a self-report questionnaire to assess R/S (Pargament, 2007). Furthermore, if a patient indicates that R/S is not a significant factor in his or her medical care, the clinician can explore other coping mechanisms that are important for the patient. When a patient responds to these questions with a specific religious or theological concern, or an R/S belief that may run counter to recommended medical care, the issue should be explored further with the patient, the patient’s minister or clergy person, or both (Koenig, 2000). In such instances, the clinician may also want to obtain consultation from an appropriate professional chaplain (Magyar-Russell, Fosarelli, Taylor, & Finkelstein, 2008).

In his recent book, *Spiritually Integrated Psychotherapy: Understanding and Addressing the Sacred*, Pargament (2007) describes in detail signs of both R/S resources/strengths and R/S distress that the clinician should be attuned to when asking R/S questions. Some examples of possible R/S distress include: ‘Divine Struggles’ such as feeling abandoned or punished by God; ‘Intrapsychic R/S Struggles’ such as doubting one’s faith or God’s existence; and ‘Interpersonal R/S Struggles’ such as disagreeing with what one’s church teaches or feeling like family, friends, or clergy are hypocrites.

Spiritually integrated interventions and clinical issues

Spiritually integrated interventions (for reviews see Pargament, Murray-Swank, Magyar, & Ano, 2005a; Pargament, Murray-Swank, Tarakeshwar, 2005b) in which R/S issues and concerns are the focus of clinical attention, have just begun to be scientifically developed, empirically tested, and practised in applied settings. As discussed by Magyar-Russell & Pargament (2006), the majority of interventions for R/S struggles have been developed with particular life experiences in mind. For instance, Cole and Pargament (1999) implemented an intervention to address feelings of spiritual disconnection and conflict with God for cancer survivors. Pargament and colleagues (2004) carried out an eight-week psycho-spiritual intervention designed to help women draw on their spiritual resources in coping with the challenges of HIV, including spiritual struggles. Although the development and testing of a spiritually-integrated intervention specific to the psychological, physical, and R/S challenges of burn survivors is ultimately an important aim, another useful approach that may facilitate acceptance, healthy adjustment and growth following burn injury is integrating the use of cognitive techniques with R/S. For instance, gaining an understanding of patients’ idiosyncratic R/S meaning systems about the burn injury through guided association, helping patients identify the origin of their religious assumptions and automatic thoughts, challenging absolute or dichotomous thinking when appropriate (Nielsen, Johnson, & Ellis, 2001; Richards & Bergin, 2005; Shafranske, 1996; Worthington, Kuru, McCullough, & Sandage, 1996). Behavioural strategies could also be effectively adapted to assist burn survivors with their personal R/S coping process (Miller & Martin, 1988; Propst, 1988, 1996). Techniques such as activity scheduling may be used to plan times for contemplation, meditation, or prayer, and relaxation and breathing exercises could be integrated into these religious and spiritual activities as well. Bibliotherapy using religiously orientated works, as well as ‘behavioural experiments’ in which patients practise asking for spiritual support (e.g., prayers, requests for religious rituals or sacraments, engage in

discussions about God, spirituality, or meaning) from loved ones or clergy, may also be options in clinical interventions aimed at modifying maladaptive religious and spiritual coping methods (Miller, 1999; Miller & Martin, 1988). It is also important to keep in mind that each clinician must work within his or her own professional and personal boundaries. Formal graduate training and/or continuing education for health professions is recommended before conducting spiritually integrated psychotherapy.

Understanding the burn survivor's past and current worldview, including their R/S belief system, improves the clinician's ability to work with the patient effectively and sensitively. The challenge for the clinician is to help burn survivors identify and draw on the R/S strengths and resources that best fit them, and the situation at hand, and ultimately help the survivor work toward acceptance, healthy adjustment, and growth following their burn injury.

Conclusion

More research into the prevalence of PTG and utilization of spiritual and religious coping is clearly needed. These are promising new areas of study that are likely to have a positive impact on effective interventions for patients and families surviving burn injury. Research should follow the bio-psychosocial model and take into account pre-injury psychological variables and personality variables that may affect the potential for PTG, as well as injury-related factors and coping skills, including the use of religion and spirituality. The use of a bio-psychosocial model may also help to illuminate the relationship between distress, PTG, religiosity and long-term quality of life.

Acknowledgments

This research was supported by the National Institute on Disability and Rehabilitation Research in the Office of Special Education and Rehabilitation in the US Department of Education (grant no. H133A070047), the National Institute of Health (grant no. RO1GM4272509A1, no. 1R01AR05411501A1, 1R03HD052584-01A2, Wiechman Askay) and Johns Hopkins Center for Mind Body Research (R24AT004641-01, Magyar-Russell).

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Figure 1.
Hypothesized bio-psychosocial model of adjustment to burn injury.