Posttraumatic Growth: A Comprehensive Evaluation of the Recently Revised Model

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SUMMARY

For the last 30 years, the conceptualization studies of posttraumatic growth (PTG) which refer to the positive changes as a result of the struggle with adverse events, have been continuously evolving with new findings. In line with this empirical evidence, Tedeschi and colleagues have proposed a revised model in which PTG is accepted both as a process and an outcome. The roles of the concepts such as wisdom, resilience, socio-cultural factors are explained better. As the ultimate aim of the model, the authors suggest reaching the dimensions of PTG not hedonistic happiness or well-being. This new model include, gaining the wisdom that comes with the existing stress, possessing the newly achieved problem-solving repertoire, and also re-structuring new-life narratives, meaning of life and flexible schemas. Furthermore, the latest research has provided us the evidence that, in the process of PTG, paradoxically both positive (PTG) and negative changes (Posttraumatic Depreciaton) are experienced together. But even though the difference is small, positive changes are consistently found to be greater. The aim of this paper is to describe the revised model with the latest empirical findings and provide a literature review with implications for clinical practice.

Keywords: Psychological trauma, posttraumatic stress, posttraumatic growth, wisdom

Traumatic experiences cause not only a disruption in mental health and leave deep marks, but also processes that increase psycho-social functionality such as deriving meaning from pain, skill development and taking new lessons from life (Helgeson et al. 2006, Park 2010). Indeed, the idea that traumatic events, in the long run, can make radical transformations and positive changes in one's life have been known to exist in philosophical, literary/mythological and religious sources for centuries (Affleck and Tennen 1996). Hence, with the effect of *Positive Psychology* movement, which was found in the 1990s with the post-modernism background, transformation and differentiation experiences after trauma was started being researched systematically by models such as *Stress-Related Growth* (Park et al. 1996), *Adversarial Growth* (Linley and Joseph 2004), *Perceived Benefits* (Tennen et al. 1992) or *Benefit Finding* (Tomich and Helgeson 2004). Among all developed models and approaches, the most experimental research has been done with the *Posttraumatic Growth* (PTG) model and its scale (Tedeschi and Calhoun 1995, 1996, 2004; Tedeschi et al. 1998).

The research supporting the idea that traumatic experiences can result in positive outcomes in cognitive, emotional and behavioral areas was done with different age groups (Levine et al. 2008, Park et al. 2008), different traumatic events (Crawford et al. 2014, Dursun et al. 2013, Moran et al. 2013, Pat-Horenczyk et al. 2015, Sawyer et al. 2010, Steger et al. 2008, Ullman et al. 2014) and with different cultures (Ai et al. 2007, Aslam and Kamal 2013, Powell et al. 2003, Schroevers et al. 2010, Teodorescu et al. 2012).

Received: 01.11.2018, **Accepted:** 08.08.2019, **Available Online Date:** 09.01.2020

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https://doi.org/10.5080/u23694

It has been recently proposed that exciting and long-term nature experiences such as travelling the world or going on expeditions to the poles by oneself or space travels, that allow the individual to exceed his/her limits, can also result in changes and transformations as in PTG (Kjærgaard et al. 2015). It is still not known whether or not these experiences that change self-perception originate from traumatic experiences such as "coming face to face with death". The result of these exciting experiences differs from the result of the PTG process. The relationship between growing with these exciting experiences which are increasing in our country day by day, could be the subject of future research. Despite the acceptance of the model proposed by Tedeschi and Calhoun (1995, 1996, 1998, 2004), Calhoun et al. (2010a), Tedeschi et al. (2018) subsequently developed a more comprehensive model by adding the recent research findings, such as the concept of psychological resilience. Also, the emotional stress persisting with decreasing severity at all stages of the PTG was accepted as a normal and expected outcome attributed with varying meanings and roles. For example, whereas the excessive emotional stress immediately after the trauma caused intrusive ruminations, the same emotional stress lead to deliberate ruminations in appropriate circumstances. Although not yet properly located in the model, new concepts such as *Posttraumatic Depreciation* or "negative change" have also been recognized. The basic aim of this article is to explain comprehensively the point reached by the PTG process in the last revised model and to review the reflections on therapeutic approaches and implications.

What is Posttraumatic Growth?

The developers of the PTG model use the term *trauma* as a major stressor or crisis and describe it as an unexpected and unforeseen life altering event exceeding the coping skills and disturbs or demolishes the schemas and assumptions of the individual (Tedeschi and Calhoun 2004, p.4; Tedeschi et al. 2018, p.4). *Growth*, on the other hand, is defined as a passage beyond the individual's functionality and awareness before the trauma, and as an experience of personal transformation (Tedeschi and Calhoun 2004, p.4; Tedeschi et al. 2018, p.4). Thus, PTG conceptually differs from similar concepts such as *recovery*, *resilience*, and *adjustment*.

PTG can be described as being beyond returning to the pre-traumatic state, and as a *de novo* self and life narrative or scenario (Stewart and Neimeyer 2001) or process (Tedeschi and Calhoun 1996, 2004) encompassing cognitive, emotional and social struggle. After the trauma, in order to adjust to the new circumstances, the individual would construct over the past experiences cognitive, emotional and social designs of more integrative, flexible and realistic character, that also include the tenets of the traumatic event (Janoff-Bulman 2004). It is assumed that this reconstructive change would lead the individual to a level of wisdom making him/her create a new and flexible life history or construct and become more resilient in facing prospective difficulties. Although traumatic events are not the definitive requirements to gain wisdom, critical life events are still assumed to accelerate this process (Webster 2010). Indeed, research has determined that wisdom and PTG are positively correlated (Aldwin and Levenson 2004, Linley 2003, Webster and Deng 2015). It is claimed that the final goal aspired in the PTG process is comparable to attainment of selflessness or having no-self, as for example reached in Buddhism or Sufism by altruistic devotion to a holy mission (Tedeschi and McNally 2011, Schimmel 2018).

The PTG journey is, in the general sense, both a process and an outcome (Tedeschi et al. 2018). The struggle to cope with the process of emotional, cognitive, behavioral and even biological changes, which extend over a long stretch of time, becomes a subjective experience for each individual at its completion. Some authors argue that traumas affect self-perception by altering permanently the individual's emotional, behavioral and cognitive patterns, and that the PTG process actually leads to a personality change especially in the personal strength dimension (Affleck and Tennen 1996, Park et al. 1996). Although PTG is known to bring about a positive identity change (Tedeschi et al. 2018 p 38), whether personality change, in the general sense, can occur is a subject of debate (Caspi et al. 2005, Fleeson 2004).

PTG Dimensions

The 5 dimensions of change encompassed by the PTGI, namely *Personal Strength, New Possibilities, Appreciation of Life, Relating to Others, and Spiritual/Existential Change* can be experienced in all or in part. (Tedeschi and Calhoun 1996, 2004; Taku et al. 2008). *1) Personal Strength* means a positive change in the individual's self-perception. Nietzsche's (1889-1998) well-known words "what doesn't kill me makes me stronger" describe the increased positive coping skills with the experienced difficulties, transforming self-perception from being the "victim" to being a "survivor"; such that the individual has higher self- esteem, and feels more powerful and courageous in being ready for prospective adversity. The individual recognizes human fragility and vulnerability, realizing that life can impact on her/him. The myth "Nothing would happen to me", based on the assumption of an equitable world, is replaced by "If I have gone through this, I can go through anything" which strengthens the sense of self control. *2)* The *new possibilities* is about the discovery and awareness of previously unseen choices regarding self and life, enabling the assignment of new aims or ascribing better meaning to personal life. Awareness of new possibilities can develop before as well as after gaining strength. For example, the badly exploited individual may discover his previously untested

abilities and skills and may use these for raising awareness in the society. *3) Appreciation of life* is being grateful for every day that the individual lives, learning to stay in the moment and discovering to be happy with small events. This dimension represents attribution of importance, increasing value and gratitude to life, and believing that it is worth living. That life is not guaranteed is understood through the traumatic experience, such that life gains a special significance and each day lived is considered a privilege (Janoff-Bulman 2004). *4) Relating to others* stands for increased selectivity in making relationships; such that the individual desires to experience more meaningfully and profoundly each valuable day with those who are close to her /him. This dimension stands for the discovery of real priorities in life; and establishing charitable, meaningful relationships centered in good will through the willing acceptance of each day being a gift, *5) Spiritual/Existential Change* is the process of strengthening the morale. While restructuring his/her self and the world, the individual, desiring to understand the causes of and personal responsibilities in the traumatic events, questions his/her existence and beliefs,the meaning of life, its importance and personal goals. Upon successful completion of this cognitive evaluation or analysis, the individual gains a new and adaptive spiritual perspective, and his/her religious beliefs stretch, alter to become compatible with the new situation

In the PTG process, disappointment turns into appreciation and gratitude; the inability to envisage is replaced by preparedness; vulnerability or fragility changes to personal courage and power (Janoff-Bulman 2004). Paradoxically, individuals feel more vulnerable yet more powerful. In the literature, it has been debated from the beginning whether or not these transformations reflect the reality or represent the self-reported illusory perceptions of the victims versus actual growth (Frazier and Kaler 2006, Frazier et al. 2009, Hobfoll et al. 2007, Lechner and Antoni 2004, Taylor and Armor 1996, Taylor and Brown 1988). Even though individuals believe having experienced changes in particular dimensions, there are findings and comments on the absence of an expected increase in the scoring before and after trauma on the related well-being scales; and that individuals want to believe the reality of these changes that are also demanded from them by their social networks (Frazier and Kaler 2006, Frazier et al. 2009). However, according to Zoellner and Maercker (2006), the PTG process encompasses both an illusional and a real change. Thus, although the trauma victims/survivors believe in an illusional recovery process to cope with the trauma, this belief itself causes a real transformation. This comment supports the view that PTG is not just an outcome but a process. Making oneself believe to be going through an illusional change in order to overcome emotional stress needs to be accepted as part of the coping mechanism. The above referred "illusional change" is not avoiding to face the reality. On the contrary, it is an important part of the cognitive processing needed to give meaning to reality. According to the research by Johnson and Boals, (2015) if the event centrality is a breaking or reference point for the personal identity, then individuals enter the PTG process. In fact, this observation only supports the posit that traumas with a violent impact can result in growth (Tedeschi and Calhoun 2004 p.5). Also, studies done so far prove the existence of PTG. For example, in some studies carried out with survivors, despite hiding the heading of "posttraumatic growth" on the psychometric scales, the participants still showed PTG symptoms (Peterson et al. 2008). In another study, the results on PTG symptoms were obtained from the relatives of the trauma survivors (Blackie et al. 2015, Park et al. 1996, Weiss 2002). In the study conducted by Weinrib et al. (2006) with women living in a community, PTG was found to be negatively correlated with social desirability. Meta-analysis studies demonstrate that there are positive changes in at least one dimension, especially in personal strength and relation to other dimensions of PTG (Helgeson et al. 2006, Sawyer et al. 2010).

The most widely used 21-item PTG Inventory (PTGI) (Tedeschi and Calhoun, 1996) for adults has been adapted to the Turkish language and different factorial structures have been statistically determined (Dirik and Karancı 2008, Dürü 2006, Eren-Koçak and Kılıç 2004, Kağan et al. 2012, Kılıç 2010, Magruder et al. 2015). Following the debate in the recent literature on the necessity of increasing the questions on the spiritual existential dimension (Hullmann et al. 2014, Morris et al. 2005), the extended 25-item PTGI-X with 5 dimensions (Tedeschi et al. 2017), the 10-item shortened form, PTGI-SF (Cann et al. 2010b) and the PTGI-C developed for children (Cryder et al. 2005) have been made available using data acquired in Turkey, Japan and the USA.

The Last Revised PTG Model

In the general sense, the last revised PTG model (Tedeschi et al. 2018) maintains the same principles as the previously developed versions (Tedeschi and Calhoun 1995, 1996, 1998, 2004), but contains the more comprehensive, cyclical and multiple relationships. Also, topics on social support, self-disclosure and self-analysis together with proximal and distal socio-cultural effects have been discussed more clearly. The emotional stress that continues throughout the PTG process was emphasized more as playing a triggering role in every stage in this model. The most important difference is that the authors have conceptualized the PTG process beyond the possible benefits of an adverse situation as a fulfilling personal transformation. In fact, the last research data have clarified the difference between growth and perceived benefits (Jansen et al. 2011) which were from time to time used interchangeably (Lechner et al. 2003, Mols et al. 2009). Perceived benefits are the possible gains from an adverse situation. These benefits may not always cause a permanent change in identity or

personality. For example, the individual may take better care of his/her physical health after recovery, may stop using drugs or may want to spend more time with friends. These changes are undoubtedly important and valuable but may not involve a deeply personal transformation.

As illustrated in Figure 1, the sequential stages of the PTG process in the revised last model PTG start with the pre-trauma conditions. However, not everybody enters the PTG process in this model. Because similar traumatic events do not have the same severity of impact, those individuals with the required psychological resilience or basic schemas that adequately explain the event do not enter the PTG process and do not experience a personal transformation. It has been determined that the basic schemas of psychologically resilient individuals are less affected by trauma and demonstrate less PTG symptoms (Levine et al. 2009, Westphal and Bonanno 2007). The PTG process starts with automatic intrusive rumination when the core schemas are shaken and the individual has severe emotional stress. The ultimate goal is adopting new life narratives by willing intrusive rumination, editing the life story and reaching the PTG stage through the interaction of wisdom and on-going emotional stress. What the individual is to achieve is to be better prepared for and meet with greater strength any future adversity in order to avoid repeating the PTG process, as well as gaining flexibility in the schemas to reach a decisive psychological maturity. Hedonistic way of happiness, well-being or life satisfaction, even if gained through the PTG, are not the ultimate goals in this model. Emotional stress is effective at every stage of growth.

The stages of this model (Figure 1) consist of *(1)* Pre-trauma conditions and personality traits; *(2)* the seismic effect of the event, cognitive processing and intrusive rumination; *(3)* expressing oneself in an accepting and emphatic environment, opening up, emotional regulation and coping through self-analysis; *(4)* social support with proximal and distal cultural effects, using adaptive coping strategies such as religion and reframing, *(5)* interpreting the goals with deliberate rumination, accepting the change and producing new schemas, *6)* building broadened enriched life narratives and stories in order to understand the world, increased wisdom, psychological resilience, flexibility and increased repertoire for dealing with problems. Although the whole process follows a sequence, it is cyclical and interactive.

If the model is evaluated in the given order; firstly, the resources and investments of the individual before the trauma are very important for making use of in managing the PTG process. It is known that, apart from psychological resilience, the personality traits of extraversion, openness to new experiences, conscientiousness, and agreeableness, self-efficacy, cognitive skills, religiousness and openness to religious change, hope, optimism and even creativity, together with social resources such as perceived social support and financial strength lead to more PTG (Cohen et al. 2008, Forgeard 2013, Gül and Karancı 2017, Hobfoll et al. 2007, Karancı et al. 2012, Tedeschi and Calhoun 1996, Tennen and Affleck 2008). As the individual's previous trauma experiences increase and his mental state worsens, the individual shows less PTG (Gül and Karancı 2017). Although it is known that, less PTG is achieved as the previous traumatic experiences of the individual increase and his/her mental condition deteriorates (Gül and Karancı 2017), and that being female (Vishnevsky et al. 2010) and being young (Helgeson et al. 2006) increase the PTGI scores, there can still be different results depending on the type of the trauma (Kılıç et al. 2016).

The second step is the individual's cognitive processing skill that appears as a result of the seismic effect of the trauma and is one of the key points of the PTG. It has been known from the beginning that trauma has a seismic effect seriously forcing and even demolishing many beliefs, assumptions and foresight about the kind of place the world is, how the universe works and the place and missions of the individuals in this order (Janoff-Bullman 1992, 2004). The most important risk factors involved in the transformation of traumatic experiences to psychiatric disorders are known to be the severity and the length of the trauma, and the emotional and physical closeness to the persons lost. However, traumatic events of the same context have different effects on different people (Aker 2016). Therefore, the seismic effect of the trauma on the core schemas, the coping strategy and cognitive and emotional processing skills of the individual are more crucial than the character of the trauma. (Calhoun et al. 2010a, Danhauer et al. 2013, Park et al. 2008, Triplett et al. 2012). Recent findings indicate the foremost importance of the impact severity on the core beliefs/schemas about the world, future, and the self (Calhoun et al. 2010b, Lindstrom et al. 2013). In other words, authors refer to a "Psychological Richter" (Taku et al. 2015, p.564). Recent studies have shown a curvilinear relationship, stronger than a linear relationship, between PTG and the severity of the traumatic stress caused by the Psychological Richter impact. (Butler et al. 2005, Levine et al. 2008, McCaslin et al. 2009, Shakespeare-Finch and Lurie-Beck 2014, Solomon and Dekel 2007, Kılıç and Uluğ 2018). In other words, there needs to be critical level of traumatic stress for the PTG to emerge. This critical point is especially more valid for the survivors of natural disasters and war (Shakespeare-Finch and Lurie-Beck 2014). The relationship between this optimum level of stress and the PTG constitutes the interaction of contrary powers, as in the dialectics of the German philosopher W. F. Hegel (1807/1977). The growth completed as a result is the change synthesized by the traumatic stress and the PTG. According to the meta-analysis by Linley and Joseph (2004), although traumatic stress and PTG show a particular synchronicity, individuals showing PTG display less psychiatric disorders with time.

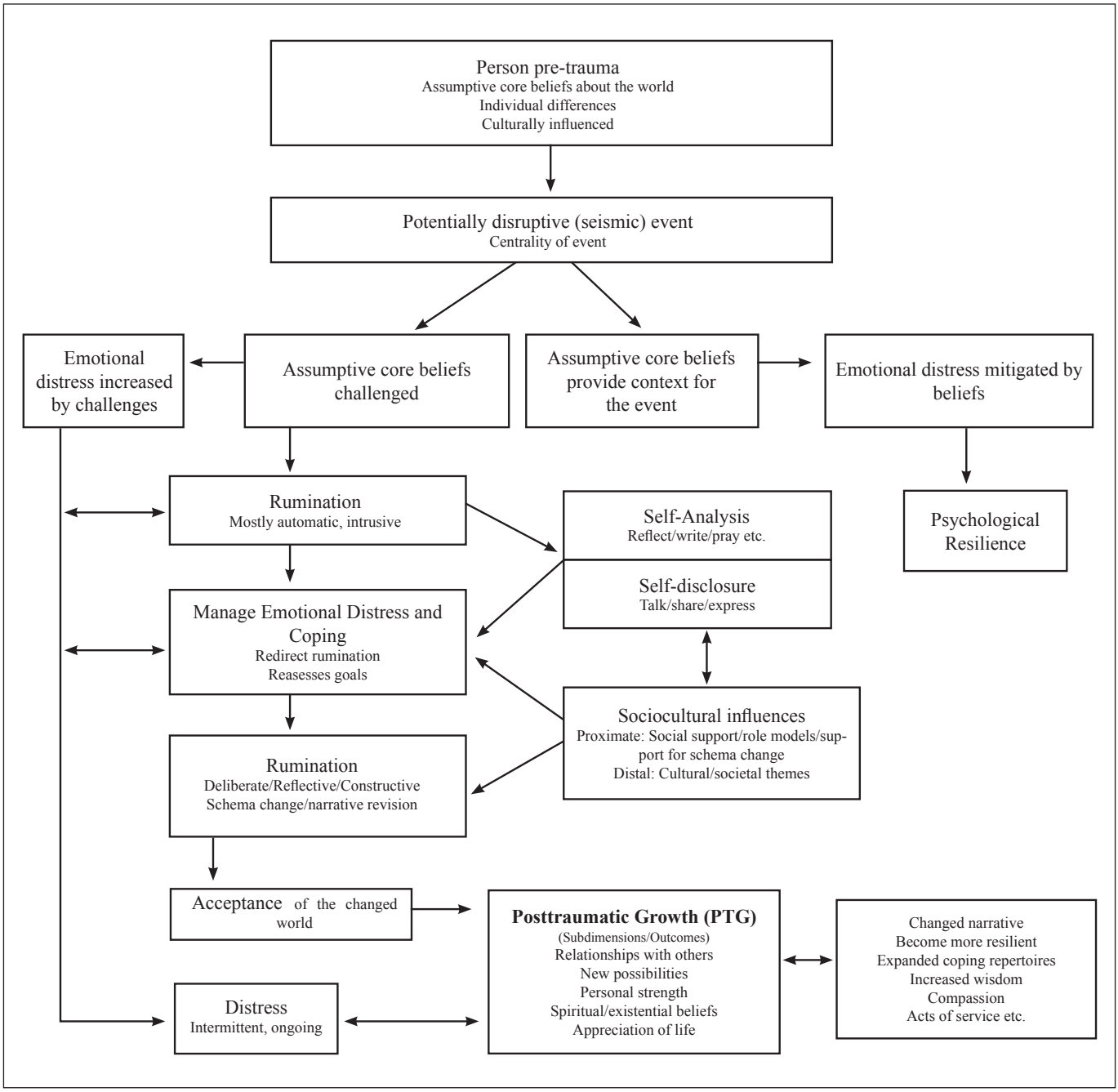

Figure 1. A Revised Model of Postraumatic Growth (Tedeschi et al. 2018 p. 44)

According to PTG model, growth is not the automatic and inevitable result of trauma, but, on the contrary, it is the process of understanding and interpretation resulting from conscious and deliberate efforts. However, before this conscious effort, the individual being under the seismic effect of the trauma and unable to assimilate the event with the old schemas and not yet able to accommodate new schemas, enters a process of intrusive, negative and dysphoric rumination for a certain period of time. The rumination stage, causing the severe emotional stress immediately following the traumatic event, is characterized, at least in the beginning, by intense thoughts on how and why the event had taken place, and counterfactual arguments with "what if"s on how it could have been escaped (Nolen-Hoeksema and Morrow 1991, Nolen-Hoeksema et al. 2008). The individual tries to gain back his sense of control, which is lost with the trauma, by focusing on himself/herself with ruminative thoughts similar to worry (Nolen-Hoeksema et al. 2008; Watkins 2004, 2008) which have a triggering function in the PTG process. Results of Taku et al. (2009) on Japanese and American participants have demonstrated that this intrusive rumination seen immediately after the traumatic event predicts the PTG

process. However, if this rumination process continues chronically, instead of providing an active and constructive solution to the problem, it could lead to passive reliving of the event and further helplessness and pessimistic emotions, and cause cognitive biases such as negative self-perception and self-accusation (Nolen-Hoeksema 1991). In the literature, the widening examples of adaptive and non-adaptive forms of these thoughts, focusing on the past and entering and occupying the mind involuntarily and uncontrollably are becoming more and more prevalent (Treynor et al. 2003, Watkins 2008). However, a constructive type of rumination, defined as the deliberate rumination process with a crucial role in the PTG process is also described in the model (Cann et al. 2011).

In the third step of the PTG, the individual passes from the non-constructive "cud chewing" process of intrusive rumination to the process of expressing or sharing feelings in writing or verbally. Everybody wishes to transfer his/her story face-to-face or through various channels such as diaries, the social media or blogs; and sometimes display a political outburst; thus, expressing their emotions genuinely by getting to the core. In this way they bring their emotional stress under control and by listening, unawares, to themselves they start to analyze what they speak or write; thereby developing insight and awareness about themselves and the traumatic event. This changes the individual's self-perception in a positive way (Tedeschi et al. 2018, p.50). It has been stated in relation to the mechanism of this self-disclosure, that, the initial guilt and shame emotions are first replaced by anger and later by acceptance (Pennebaker et al. 1998, Ullman 2014). Similarly, according to Park et al. (2008), whereas anger facilitates the process of coping with trauma and meaning-making on the way to growth, depressive emotions increase the level of the traumatic stress. The feeling of shame is one of the internal, painful, catastrophic and depressive feelings related to the individual's authentic existence. Anger, however, affects the individual's well-being more positively as it is responsibly externalized (Tangney et al. 1992). In relation to the effect of acting out on PTG, participants of a study in China with a history of work or motor accidents who narrated their emotions and thoughts about the accident face to face, on the telephone or in the internet in a more genuine and sincere manner were determined to have a higher PTG (Dong et al. 2015). Similarly, a study with the Afghanistan war veterans demonstrated that externalizing emotions facilitated the PTG process (Currier et al. 2013). Another study determined that self-disclosure, artistic activities undertaken to regulate emotions and creativity positively predicts PTG; such that the possibility of increased creativity being an outcome of the PTG process was argued by the author (Forgeard 2013).

In the fourth step of the PTG process externalizing emotions and thoughts thoroughly and being able to do self-analysis at the same time are very important for coping strategies such as using social support (Prati and Pietrantoni, 2009). When individuals express their traumatic experiences, the listeners may help to view the traumatic event from different perspectives and those with similar experiences can be role models (Cobb et al. 2006). Social support brings up additional qualities such as compassion, belongingness, attachment, tolerance, emotion sharing and understanding the value of relationships, which could be accepted as part of the PTG process. At the same time, social relationships also provide guidance for reaching material aid and resources. Receiving material and psychological support strengthens the trauma survivors. Emotional support given to cancer patients (Schrovers et al. 2010), and perceived social support by flood survivors in Colorado (Dursun et al. 2016) predict positively the growth. However, in the background, there are distal and proximal socio-cultural factors affecting the dynamics of both social support and deliberate rumination. Whereas proximal cultural factors are social resources such as the directly accessible family, school, friends, distal factors constitute the background of collective guideline or memory on common beliefs and values system (Tedeschi and Calhoun 2018, p.32; Triandis 2001). According to Calhoun et al. (2010a), if the background of a culture includes potential elements that could reinforce the possibility of the PTG process, the individuals of that culture show more PTG. In the USA, harboring a more religious culture than Australia, more growth was seen in the spiritual change dimension (Morris et al. 2005). Indeed, Karancı et al. (2012) also observed more extensive change in the spiritual change dimension of growth in the normal population of Turkey. Similarly, research study comparing Turkey, Japan, and the USA demonstrated that the highest mean total PTG was observed in the Turkish population followed by the American population. In the Turkish population, the highest change was detected in the spiritual and personal strength dimensions (Tedeschi et al. 2017). Traces of PTG parallel to these research findings can be searched for in the religion and sufizm that nourished the cultures of Thrace and Anatolia, and in the general public or folk culture of Turkey, as reflected by "absolute trust in God's judgement", "acceptance of good or bad events as planned by God", and "doubtless belief in God's knowledge on what is good or bad for God's creatures", and the "understanding of adversities as God's attention on God's creatures" (Schimmel 2018, pp.25-27). Also, perceptions of a life facing mortality and its crises as tests to be overcome, of the suffering or training the nafs (self) as the necessity for reaching spiritual satisfaction in faith, and of the importance of patience and gratefulness are common to sufistic point of view (Schimmel 2018, pp.18-19). These concepts may have positive effects on the PTG process.

Furthermore, there is widespread understanding of the implications by folk literature that life has a definitive dialectic

on the balance of life based on adversities; and that therefore ultimately suffering, struggle and patience will be met with a relief from the right source, at the right time and place. Hence, there are many sayings and proverbs in the folk literature that are related to the issues of the PTG process (Yurtbaşı, 2012), such as : Cefa/Long-Suffering (thou canst not see joy without cefa or be a vizier without disgracement; there is weeping for every play; the green flourishes richly after fire); Agony (honey isn't eaten before curse arrives; he who didn't taste the bitter cannot taste the sweet); Remedy/Support (the whimperer has a listener; there is no misery without remedy; every door has a key); Patience (God is great; he who laughs last laughs the best; time is remedy for all; patience ends in salvation); Resilience (what happens to one is endured; God gives snow according to the mountain), Fate/Resignation (matters reach their possible end; no way to counter fate and death; judgement cancels precaution); The Inevitable (the bloom wilts; the weeper smiles; the arriver passes, the settler departs/passes away); Inadequate Support (my wound is a hole in a wall to the stranger; fire burns where it is); Seeking the Right Help at the Right Time (Remedy cannot come from the sick doctor; not every bandage wraps every wound; the wound is wrapped while its hot); Permanence of the Scars of Pain (The nail drops, its hole remains; the canine endures the winter, but ask its skin, how). These concepts support the self-disclosure, self-analysis, seeking and benefitting from social support in the PTG process. Indeed, many studies conducted in Turkey report that perceived social support predicts the PTGI scores (Bozo et al. 2009, Dirik and Karancı 2008, Gül and Karancı 2017, Özlü et al. 2010, Tanrıverdi et al. 2012, Yılmaz and Zara 2016).

In the fifth step, individuals, backed by social support in an accepting and empathic environment and the presence of role models, enter a process of the constructive deliberate rumination that enables them for objective self-analysis (Calhoun et al. 2010a, Cann et al. 2011). This process is helpful for reconceptualizing and interpreting or ascribing a meaning to what has been experienced and involves citing the experiences, expressing feelings, receiving support, acceptance, going through a change of perspective on the experiences and forming new schemas. The individual regenerates from the lost experience the meaning of himself/herself and of his/her life, thus experiencing a type of resolution (Tedeschi and Calhoun 2008). This resolution is an integrative experience of personal transformation. In the studies with adult Turkish workers (Gül and Karancı 2017) and with both Turkish and American students (Haselden 2014), it was found that deliberate rumination predicted the PTG process positively and significantly.

With the completion of the PTG process, which, in a sense, is rewriting of one's life, when the individual accepts the world as a rich mosaic with its complexity, harmony, balance and colors and attains, beyond just a hedonistic happiness, his/her own relative place, value, and importance. PTG is not the mere attainment of personal life satisfaction but a stage of deep wisdom in devoting one's self to compassionate sharing and empowerment of the common good. However, emotional stress continues to trigger change and growth. Hereafter, the outcomes of the PTG process involve stronger response to future traumas, decision making resilience, psychological preparedness or the state of readiness, expanded repertoire for problem solving, wisdom, acquisition of insight and self-reflection which is a multidimensional thinking skill that comes before an egocentric perspective, self-compassion and compassion for others. Ultimate happiness, well-being and life satisfaction are not the requisite end points of the PTG process in this model.

Posttraumatic Depreciation

One of the most discussed subjects about PTG is whether or not life events that leave such permanent traces would only cause a positive change (Tornich and Helgeson 2004, Zoellner and Maercker 2006). On the basis of this subject, Baker et al. (2008) prepared a separate PTG Inventory by replacing the positive items of the original PTGI with their negative forms to investigate the changes experienced by individuals in the same dimensions. The results demonstrated that, although appearing to be paradoxical, some individuals could experience both the positive and the negative changes in a given dimension. For example, while "I understood the value of my life" was positively marked, the statement "I realized the worthlessness of my life" could also be marked in the positive sense; or while agreeing with "my compassion towards others has increased", an individual could also express in the same item "feeling hardened'" against others. These negative changes were described as *Posttraumatic Depreciation* (PTD) and, being a new term, there are a limited numbers of studies on it in the literature.

Studies with population samples of the USA (Baker et al. 2008) and of Australia (Barrington and Shakespeare-Finch 2013) demonstrated that after the traumatic event both the positive and the negative type of changes were experienced; but the incidence of the positive change or growth exceeded that of the negative change or depreciation. Whereas PTG correlated with deliberate rumination, PTD was found to be correlated with intrusive rumination (Cann et al. 2010a). The intrusive rumination immediately after the traumatic event, the deliberate rumination started in the long term and the severity of the disturbance of the schemas were found to predict significantly the extent of the growth. Results of the community-based research by Foregeard (2013) showed that the mean PTGI scores were higher than those on the PTD; and whereas intrusive rumination predicted PTD, deliberate rumination predicted PTG and the perception of creativity

positively. According to the results of the research in Sweden with the South-Asian Tsunami survivors of 2004 (Michelsen et al. 2017), the people who experienced more severe and intense trauma by witnessing the tsunami on the beach showed higher PTG and PTD scores; but, in agreement with previous research, the scores on the PTGI exceeded those of PTD, indicating that despite the very adverse effects of traumas, the growth outcome exceeds the depreciation. Results of factor analysis indicate that PTD and PTG are independent constructs and are not correlated with each other; meaning that an individual can experience both positive and negative change at the same time. The relationship between negative changes and PTSD or traumatic stress, however, have not yet been investigated. Also, the negative changes have not been investigated in Turkey. In summary, even if the data acquired after trauma are at a low level, they do demonstrate that negative changes are experienced independently of the PTG process, and that the human response to trauma is very varied and complicated.

Therapeutic Reflections of the PTG Process

The PTG model presents 3 basic reminders to clinicians. The first is the importance of the *Common Factors Approach* in psychotherapy, which has been long discussed and assumed to be "necessary but inadequate" (Frank 1971, Wampold 2015). The second is the *Rogerian perspective*, or an unconditional positive regard, an empathic language, and a sincere and genuine attitude (Rogers 1959) and the third is the fact that sense can be made of suffering, and that these painful experiences may enable gaining an *Eudaimonic approach*, a deeper personal, relational and spiritual awareness, and a wiser life orientation (Frankl 1963, Hall et al. 2010). Clinicians should build a sincere therapeutic rapport and should start the relationship by accepting that these sufferings could have a transforming effect, besides easing the patient's pain or preventing the hurt during the therapeutic process. Because the contribution to the improvement of the patient by the therapists, who can build a therapeutic alliance, is higher than the relationship built by the patient (Baldwin et al. 2007).

On the basis of these points of view, and starting with the premise that every individual is the expert on his trauma, Tedeschi and Calhoun (2006), have proposed a simple role in relation to clinical applications as the *Expert Companionship*, which is not an independent therapeutic school, but facilitates the PTG process. Expert companionship means following up the PTG process and facilitating it with an empathic, sincere and candid understanding instead of intervening directly with the eyes of an expert. This kind of companionship could be offered under the fundamental schools such as *Cognitive Behavioral Therapy* (CBT). Considering that many individuals reaching PTG do not go through a therapy process, every active listener as a family member or a friend, who has adopted the Rogerian perspective of client-oriented therapy, can carry out this type of companionship.

Recently, a five-stage growth-oriented therapeutic model was developed and started to be used at the Boulder Crest Retreat (USA) for war veterans and successful results were reached (Tedeschi and McNally 2011, Tedeschi and Moore 2016). The five-staged growth-oriented model includes the steps of *(1)* Psychoeducation, giving information about the nature of trauma and the process of normalization; *(2)* regulation of intrusive rumination and emotional reactions -relaxation techniques, mindfulness, sportive exercises, expressive techniques; *(3)* self-disclosure -exploration of thoughts and emotions in order to pass from intrusive rumination to deliberate rumination stage in a sincere socially supportive environment;*(4)* reconstructing and integrating life narratives before, during and after trauma -accepting the paradoxical nature of the PTG process and feeling more vulnerable yet stronger; *(5)* creating new life meaning, values, stories and narratives and reaching the PTG step with all five dimensions -gaining psychological resilience that will protect against future traumas.

Apart from this model, there are other interventions based on the five-step therapy cited above and used in self-help, well-known therapy approaches such as CBT, *Exposure therapy*, *Narrative* and *Expressive* therapies (Tedeschi et al. 2018). For example, Shakespeare-Finch et al. (2014) developed a program (PRO, Promotion Resilient Officers, Schochet et al. 2011), by integrating CBT and Interpersonal Therapy aiming to increase PTG and resilience in police officers with traumatic experiences by applying a 2-hour group therapy for seven weeks. Results of this randomized controlled trial showed a significant increase in the PTGI scores of the patient group as compared to the control group. Similarly, after giving resilience education (PAR- Promoting Adult Resilience) to nurses, working in mental health care, within a two-day working period, Foster et al. (2008) observed significant changes in well-being, anxiety, workplace stress, and resilience in the pre-test, post-test, and three-month-long observation evaluations..

Irrespective of the school or approach followed, clinicians need to know that they should have commanding knowledge the PTG model and that it is a long, stressful, conflicting and paradoxical process. Talking about the PTG process early in the treatment and in a didactic manner would cause the breakdown of the relationship with the patient who could resist the process. At the early stages of the posttraumatic period, the consulting patient can repeat statements ruminatively, display obvious cognitive biases or the illusion of having overcome the trauma. In all these processes, clinicians, instead of using a language that wants all symptoms to go disappear quickly, need to adopt an empathic approach that suits the patient's pace and try solely to understand his/her confused world and

perspective, especially at the early stages. While clinicians display a sensitive manner, by taking cultural differences into consideration, as PTG proceeds from one stage to the other at the patient's pace, they need to focus patiently on the content, process and emotional differences in every narration of the trauma. At the same time, by sharing the language of the patient, such as using the same metaphors, clinicians should attempt naming the emotions correctly or searching their meaning so as to regulate the PTG process correctly by accurate and well timed encouragements and orientations. The essential focal point shouldn't be the characteristic of the traumatic event but the whole cognitive processing that comes after the event with the emotional struggle.

Conclusion and Recommendations

The incidence of traumatic events is increasing in our country and the world and these can leave permanent traces on individuals. The PTG model by Tedeschi and Calhoun (1996, 2004, 2018), based especially on the *Personal Construct Theory* by Kelly (1955/1977) and the *Assumptive Model* by Janoff-Bulman (1992), is the process of reconstructing shattered life stories or narratives with cognitive and emotional efforts. The model has been continually supported by experimental studies (Helgeson et al. 2006, Sawyer et al. 2010). PTG provides us with the information that the period after trauma could be carried beyond a simple adjustment process. The revised version of the PTG model explains the period after trauma more comprehensively with cyclical relationships, and promises hope with its applicability in the practice.

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