

## RESEARCH ARTICLE

# Posttraumatic Growth and Social Support in Turkish Patients with Cancer

Derya Tanrıverdi<sup>1\*</sup>, Esen Savaş<sup>2</sup>, Ganime Can<sup>3</sup>

### Abstract

Posttraumatic growth (PTG) is the experience of positive change that occurs as a result of the struggle with highly challenging life crises. The need to understand PTG in relation to actual changes in an individual's life has recently been raised. Little is known about the role of social support in the experience of positive outcomes. The purpose of this study is to investigate the role of perceived social support in enhancing PTG in cancer patients. This study involved 105 cancer patients. The data were collected using a questionnaire that determined the socio-demographic features, posttraumatic growth inventory (PTGI) and perceived social support. Participants reported relatively high levels of PTG and social support. Total perceived social support, support from family, and friends were significantly positive associated with the development of PTG among cancer patients. Accordingly, the social surroundings of the patient should be informed about the importance of social support and how it helps the patient; they should be made aware of necessity of social support.

**Keywords:** Cancer - oncology - post-traumatic growth - positive life change - social support - Turkey

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### Introduction

Cancer, like other traumatic life events, can generate negative and positive changes on psychological wellbeing. Negative changes are defined as posttraumatic disorders and positive changes are called posttraumatic growth.

Posttraumatic growth is the experience of positive change that occurs as a result of the struggle with highly challenging life crises. It is manifested in a variety of ways, including an increased appreciation for life in general, more meaningful interpersonal relationships, an increased sense of personal strength, changed priorities, and a richer existential and spiritual life. It is also suggested that posttraumatic growth mutually interacts with life wisdom, and the development of the life narrative, and that it is an ongoing process, not a static outcome. The process of posttraumatic growth is set in motion by the occurrence of a major life crisis that severely challenges and perhaps shatters the individual's understanding of the world and his or her place in it (Tedeschi and Calhoun, 2004).

PTG is a multidimensional model that incorporates a number of different life changes for cancer patients. The domains of positive life change reported by the cancer survivors in this study may reflect a cultural influence, in addition to the type of PTG likely to be perceived in an illness context. In particular, being diagnosed with cancer induced a number of health-related benefits for many participants. Health-related benefits described by participants included an improved diet, physical fitness

(sport and exercise), accessing natural therapies, increased body awareness, regular medical checkups, meditation, adherence to treatment, and cessation of risky behaviors (e.g. smoking cessation). Also, cancer survivors expressed a newfound compassion for others after facing the challenges of their own diagnosis (Morris et al., 2011). Higher PTG is related to better health (Cohen and Numa, 2011). Both the qualitative and quantitative assessment of PTG revealed that appreciation of life was the most salient area of positive life change for cancer survivors; relating to others and personal strength were also shown to be important domains (Morris et al., 2011).

On the other hand, the sudden confrontation with a life threatening disease and the often painful and impairing cancer treatment may be associated with severe physical side effects and disruptions of daily and social activities. Common psychological reactions include feelings of depression and uncertainty about the effectiveness of treatment, the future, the possibility of long-term side effects, and cancer recurrence (Schroevs et al., 2011). Silvan, Moreira, and Canavarro (2011) established that a more negative perception of the impact of cancer was significantly associated with higher emotional distress and impaired Physical and Psychological Quality of Life. PTG moderated these relationships, acting as a stress-buffering mechanism. Among women who perceived cancer as having a more negative impact on their lives, higher levels of PTG buffered this negative perceived impact on Psychological and Social Quality of Life and also on

<sup>1</sup>Department of Psychiatric Nursing, Faculty of Health Sciences, <sup>2</sup>Department of Internal Medicine, Faculty of Medicine, Gaziantep University, Gaziantep, <sup>3</sup>Faculty of Health Sciences, Atatürk University, Erzurum, Turkey \*For correspondence: deryalper@hotmail.com

Depression (Silvan et al., 2011). Posttraumatic growth was correlated with a reduction of distress (Tedeschi and Calhoun, 2004).

The individual's social system may also play an important role in the general process of growth, particularly through the provision of new schemas related to growth, and the empathetic acceptance of disclosures about the traumatic event and about growth-related themes (Tedeschi and Calhoun, 2004). Social support is a critical, yet underutilized resource when undergoing cancer care. Underutilization arises in two circumstances: (a) when patients fail to seek out information, material assistance, and emotional support from family and friends or (b) when family and friends fail to meet the individualized needs and preferences of patients (Skeels et al., 2010). Social support leads to development of positive coping methods in cancer patients. Overriding influences are benefit finding and meaning making (Rajandram et al., 2011). Emotional support is important for the experience of posttraumatic growth of cancer survivors in the period following diagnosis. Those who were more able to talk about their experiences with others and had received more support in terms of reassurance, advice, and encouragement, experienced more posttraumatic growth. An alternative explanation for the associations of social interactions with posttraumatic growth might be that, by reporting such positive consequences of the cancer experience, cancer patients who have more social interactions live up to the expectations held by people around them and by society in general, with a positive attitude being highly valued (Schroevvers et al., 2011). Social support is directly related to PTG (Morris and Shakespeare-Finch, 2010).

The studies should focus on positive changes as well as negative changes. The purpose of this study is to discuss the positive changes that arise in patients as a result of traumatic lives, such as cancer. The development and the level of social support perceived as a result of factors, thought to affect development after trauma, were investigated in cancer patients in order to achieve this purpose. It is anticipated that data obtained will contribute to enrich programmes and policies for cancer treatment.

## Materials and Methods

### *Participants*

The study used a cross-sectional descriptive design and it was carried out between 1 July and 2 December 2010. The study sample consisted of 105 patients diagnosed with a variety cancer (46 men and 74 women) in who were consecutively admitted to the Department of Medical Oncology of Gaziantep University Hospital. They entered the study based on their acceptance to the questionnaire. The majority of participants in this study were willing to contribute and fifteen patients refused to participate because of illness symptoms and insufficient time.

### *Data Collection*

The data collection tools comprised an Information Form on demographic characteristics and Posttraumatic Growth Inventory (PTGI) and Perceived Social Support Scale (PSSS). The data were collected face-

to-face interviews conducted by researchers in the oncology outpatient unit. The researchers introduced the questionnaire to the participants and explained the material covered. The average time for completing the questionnaires was 20 minutes. All of the participants completed the questionnaires.

### *Data Collection Instrument*

The information form was a questionnaire comprising nine questions seeking the patient's demographic characteristics and questions about diagnosis and treatment.

### *Post Traumatic Growth Inventory (PTGI)*

PTGI was used to assess positive changes, which may perceived by the patients as a result of their illness. PTGI was developed by Tedeschi and Calhoun (1996). The reliability study of the scale was examined in a sample of university students (Tedeschi and Calhoun, 1996). Tedeschi and Calhoun (1996) reported that PTGI has acceptable construct validity, internal consistency coefficient (0.90) and test-retest reliability over a 2-month interval (0.71). PTGI was translated into Turkish by Dirik (2006). Dirik (2006) reported that cronbach alpha reliability of the scale was high (0.94). In the current study reliability coefficient of the scale is 0.86. "PTGI" consists of 21 items. Ratings are made on 6-point scales ranging from 0 (I did not experience this change as a result of my crisis) to 5 (I experienced this change to a very great degree). It consists of 21 items and three subscales that measure "changes in relationship with others", "changes in philosophy of life", and "changes in self-perception". The range of scale score is 0-105. The higher score of the scale shows that a high level of development after a traumatic experience.

### *Perceived Social Support (PSS)*

PSS was measured using the Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS was developed by Zimet et al. (1988). The feasibility and validity and reliability studies of this scale were confirmed by Eker and Arkar (2001). The scale is a 12-item self-report measure for subjective assessment of experienced social support from three sources: Family, Friends, and Significant Other. Each item is rated on a 7-point Likert-type scale ranging from "strongly disagree" to "strongly agree". The total score ranges from 12 to 84 for the entire 12-item questionnaire and from 4 to 28 for each of the three subscales. For these three subscales higher scores indicate greater perceived social support. The scales as a whole and each of its subscales have shown good internal reliability and validity (Eker et al., 2001). In the current study reliability coefficient of the scale is 0.89.

### *Statistical Analysis*

The data were analyzed using SPSS version 13.0 for percentage calculation, Kruskal-Wallis test. The relationship between posttraumatic growth and social support was tested using Pearson's correlation. The strength was expressed as odds ratios with 95% confidence intervals. The level of significance was set at  $p < 0.05$ .

**Table 1. The Correlation between Post Traumatic Growth Scores and Social Support Scores of Patients**

Scales	1	2	3	4	5	6	7
1. PTGI Total							
2. Changes in relationship with others	0.853***						
3. Changes in philosophy of life	0.761***	0.565***					
4. Changes in self perception	0.806***	0.491***	0.387***				
5. Family	0.243*	0.287**	0.068	0.205*			
6. Friend	0.212*	0.243*	0.105	0.153	0.474***		
7. Special person	0.187	0.239*	0.004	0.177	0.525***	0.294**	
8. PSS Total	0.269**	0.323***	0.075	0.224*	0.807***	0.772***	0.779***

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\*  $p < 0.001$ , PTGI: Post Traumatic Growth Inventory, PSS: Perceived Social Support

### Ethical Considerations

Regarding ethical considerations, the protocol was approved by the local ethics committee in accordance with the Declaration of Helsinki. Written information was given to the participants and their oral consent was obtained. The patients were informed about the purpose of the research and assured of their right to refuse to participate in or to withdraw from the study at any stage. Anonymity and confidentiality of subjects' data were guaranteed.

### Results

The average age of patients was  $46.26 \pm 13.10$  (Range: 18-73). A total of 53.3% were female, 34.3% were primary school graduates, 36.2% had left their jobs because of their illness, and 82.9% of patients stated they believed treatment would cure their disease. 73.3% stated they lived with partner and kids. There is no patient living alone. The total score of the post traumatic growth inventory was  $57.14 \pm 16.52$ . The highest score of self perception changes were  $29.27 \pm 7.62$ .

The total score of the perceived social support scale was  $65.90 \pm 14.09$ . The highest score means obtained from the sub-scales were  $23.93 \pm 4.77$  for family,  $22.14 \pm 6.50$  for special person, and  $19.82 \pm 6.70$  for friends.

### Discussion

The majority of patients were female, and their age average was  $46.26 \pm 13.10$ . A total of 86.7% were married, 57.1% had average income level and 61.7% were unemployed. 82.9% of patients believed that treatment would help cure their illness. In a similar study, the majority of patients believed that treatment would cure their illness (Kayış, 2009).

Participants reported relatively high levels of PTG ( $57.14 \pm 16.52$  in a possible range of 0-105). The highest score means obtained from the sub-scales were changes in self perception, relationship with others and changes in philosophy of life, respectively. Similarly, Cohen and Numa (2011) stated that patients reported high levels of PTG. In Bayraktar's (2007) study it was found that cancer patients had above average posttraumatic growth. The results of Manne et al (2004) study support our study. Patients underwent positive cognitive, emotional, and behavioural changes after experiencing a traumatic life, such as cancer, and coping with the difficulties that come with such a life. These changes affected the following fields; a positive change in self-awareness (an increase in

change during cognitive procedures, self-understanding, selflessness, empathy, maturity, self-confidence, and self-sufficiency), a positive change in interpersonal relationships (more tolerant, social support networks, establishing positive relationships with friends and family, perceiving the environment more positively), a change in their philosophy of life (cherishing the moment, understanding the value of life, giving their life a new direction, paying more attention to spiritual matters).

High scores were obtained for the total perceived social support scale and its sub-scales "Family" and "Special person". Other studies, conducted on the Turkish Community, also indicate a high level of perceived social support in cancer patients (Yıldırım and Kocabıyık, 2009; Pehlivan et al., 2011). Social help and solidarity is dominant in the Turkish community, especially in people living in Anatolia. Traditionally, relatives are in close contact in the Turkish family structure. In the event that a family member is in trouble, such as having cancer, other members make a great effort to help the troubled member. This is the cornerstone of a Turkish family. As a result, it is thought that the social support score is high.

Total perceived social support, support from family, and friends were significantly positive associated with the development of PTG among cancer. Similarly et al. (2009) indicated that total perceived social support, support from family, a private person and friends were significantly associated with the development of PTG among postoperative breast cancer patients. Özlü et al. (2010) stated that there was a positive relationship between social support and PTG. Pinquart et al. (2007) stated that high levels of social support predicted higher numbers of perceived positive changes and lower numbers of negative changes. Higher numbers of perceived gains predicted an increase in positive affect, and higher numbers of negative changes predicted an increase in negative affect at follow-up. They conclude that finding positive consequences of cancer promotes psychological wellbeing. Cohen and Numa stated that higher PTG was related to better health (Cohen and Numa, 2011). PTG is slightly associated with mental quality of life and happiness (Leloirain et al., 2010). More positive changes are related to more positive affect, whereas more negative changes are related to more negative affect and less positive affect (Schroevers et al., 2011).

In the event that sufficient and positive social support is provided to post-trauma cancer patients, it can be considered as a protective factor for issues that may arise after the trauma. In his study, Durak (2007) reported

that both social support and personal resources have an indirect effect on PTG via situation perception, cognitive procedures, and coping. Autonomy-supportive caregivers significantly predicted greater PTG (Scrignaro et al., 2010).

There is highly positive relationship between total perceived social support and changes in relationship with others ( $p < 0.001$ ). It was found significant correlation between changes in self perception and family support, and total support ( $p < 0.05$ ). It was founded that the more the patients have high social support score, the more they have changes in self perception and changes in relationship with others. These results help psychology trauma experts to take into consideration supporting factors when planning psychosocial interventions and also contribute towards minimising risk factors.

“Family support” and “Special person support” of patients that have been ill for three or more years is lower in comparison to those that have been ill for three years or less. The social support from family and special person perceived by patients decreased with the increase in illness duration. Another study conducted on cancer patients prove that the level of social support perception decreases over time (Arora et al., 2007). The reason for this may be that relatives of the patient are affected more by the situation at the start of the illness; however, gradually get used to the situation, become the care burden of the illness.

In conclusion, social support has a positive effect on post traumatic growth of patients. We can say that social support is a important factor that affects the patient’s post traumatic growth. Therefore, it is essential that social support, family dynamics in particular, should be kept alive during long term treatment; health care workers play an important role regarding the said subject. Accordingly, the social environment of the patient should be informed about the importance of social support and how it helps the patient; they should be made aware of necessity of social support in both acute and chronic period. We suggest that arrangements should be made in order to support the patient under all circumstances. In this way, psychosocial intervention programs should facilitate PTG in order to promote patient’s adjustment.

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