

# Post-Traumatic Growth after Cancer: A Thematic Analysis Study

Michael Galea<sup>1</sup>, Josianne Scerri<sup>1</sup>, Paulann Grech<sup>1</sup>, Alexei Sammut<sup>1</sup> & Christie Attard<sup>1</sup>

<sup>1</sup> University of Malta, Malta

Correspondence: Michael Galea, Department of Mental Health, Faculty of Health Sciences, Room 59, Block A, Level 1, Mater Dei Hospital, University of Malta, Malta. E-mail: michael.galea@um.edu.mt, josianne.scerri@um.edu.mt, paulann.grech@um.edu.mt, alexei.sammut@um.edu.mt, christie.attard@um.edu.mt

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## Abstract

**Background:** That a diagnosis of, and treatment to cancer brings along shock, distress and possible long-term negative life changes is very clear from human experience and research alike. But such an experience can also relate to positive life changes, as increasing research on the aftermath of serious illness, such as cancer diagnosis consistently shows. Observations of positive outcomes linked to quality of life are increasingly being found in cancer studies. These results seem to converge with post-traumatic growth (PTG) which emphasize positive life changes as resulting from considerable life-changing events that are borne from crises or trauma.

**Objectives:** Aims to this study were to 1) investigate the holistic impact and ramifications of PTG on the recovery from serious illness such as cancer; 2) clarify the relationship, if any, of PTG with mental health outcomes; and 3) how is PTG strengthened or otherwise, when one is faced by such life-changing event.

**Methods:** Using a Thematic Analysis design, we investigated how the diagnosis of, and treatment to cancer impacted the patients and survivors. Semi-structured interviews were conducted with people who had received treatment for breast (n=3), MSS (n=1), ovarian (n=2), bone (n=2), H. Lymphoma (n=1), Liver (n=1). Using descriptive mapping, we clarified whether this study results are consistent with Tedeschi and Calhoun's PTG framework.

**Results:** Findings charted on the key factors of PTG.

**Conclusions:** Cancer results in varied consequences and in negative and positive adjustments. Further development of findings which charted on major PTG dimensions is warranted.

**Keywords:** serious illness, cancer, posttraumatic growth, coping, PTG, health

## 1. Introduction

Cancer accounted for more than 10 million mortalities in 2020 (World Health Organization, 2021), making it a dominant mortality cause globally. Receiving a diagnosis of cancer and making all necessary adjustments to treatment and all life-changes involves a dire stressful experience for many involved. Sumalla, Ochoa & Blanco, (2009) emphasized the different negative psychological consequences from such a diagnosis, including anxiety, depression, fatigue, and general distress, besides impaired quality of life. Wu, Wang, Cofie, Kaminga and Liu (2016) have articulated similar responses of psychological trauma between cancer patients and other individuals involved in different types of trauma.

Recent oncological research has identified significant variances between the stressful experience from cancer patients and that of people facing other traumatic and critical circumstances in life (Smith, Redd, Peyser & Vogl, 1999). Basically, two main differences seem to emerge, namely a) whereas many traumatic experiences seem to influence individuals from the outside, cancer disease affect individuals internally; and b) whereas in most traumas, there normally is one key stressor, usually a past event, the opposite is true with cancer trauma, which is linked to an ongoing process with different stressors (eg. diagnosis, prognoses, treatments' side effects, development and severity of disease, and others). Despite the ongoing debate whether a cancer experience qualifies as a traumatic event according to the latest DSM-5 revision, a cancer diagnosis remains an existential threat envisaged as traumatic by patients (Mulligan, Wachen, Naik, Gosian & Moye (2014).

Studies do point at impressive resilience after the diagnosis and treatment of cancer (Gouzman et al., 2015). Danhauer et al. (2013) found that for many patients who conquer cancer and its treatment, this can result in personal growth that may augur and equip the individual in facing potential similar challenges later on in life. However,

experience shows that not every person counters hardships in similar fashion, because of many factors both within the persons themselves and external factors such as upbringing, environment and the like.

Post-traumatic growth (PTG) is a significant psychological progress resulting from a personal struggle with a life-threatening trauma or stressor. The life-threatening trauma is thought to shatter most key beliefs and assumptions of the individual. At this stage there seems to be a search for meaning. Baumeister (1991) found that people analyze and investigate their pain and suffering much more than their positive experiences and joys. Moreover, being meaning-seekers, individuals going through various forms of trauma and emotional distress seem to find different ways of reaching a meaningful reality (Wink, 1999). Through these long cognitive processes, individuals incorporate trauma-related information into new assumptive reality, in that the person's own perception of self, others and the meaning of trauma is reappraised and positively converted (Tedeschi & Calhoun, 1995). It is through this process that growth occurs. Calhoun et al. (2000) found that PTG becomes a transformative experience to the individual resulting in a deeper quality of life, even more significant to that experienced by the person prior to their traumatic event. Growth post-trauma occurs when the trauma threatens or crushes beliefs, life expectations or life itself (Calhoun & Tedeschi, 2006). In developing the assessment tool to investigate the present or absence of growth, the post-traumatic growth inventory (PTGI), Calhoun and Tedeschi (2006) found that PTG related to 5 domains, namely: more meaningfulness in life, stronger interpersonal relationships, healthier personal strength, better life possibilities and superior spiritual well-being, including existential change, among cancer patients.

Seller and Jenewein (2019) indicated that a number of factors promote PTG in cancer patients. Key among these are: demographic factors (gender, age, low socio-economic status and ethnicity), cancer-related variables (time since diagnosis and disease severity); personality variables (coherent self-concept, positive self-esteem, sense of optimism, positive affect and a sense of control); social context and support; adaptive coping skills; optimism, hope, and spirituality, and a strong sense of coherence.

PTG is not the same as resilience. Whereas resiliency refers to a personal attribute in which a person is able to bounce back after a traumatic event, PTG refers to the aftermath to a traumatic process on a person who, because s/he has minimal resiliency, such event challenges their assumptions and beliefs to the core. Calhoun and Tedeschi (2006) suggested that such individuals may then experience emotional turmoil and even mental illness, and only after such a personal and long struggle, may the person be able to integrate that conflict into a sense of personal growth.

In their scoping review of related qualitative research, Menger, Halim, Rimmer, and Sharp (2021), found that post-cancer PTG is seen across all present domains of PTG outcomes. Most of the studies reviewed indicated positive changes related to health behaviors, which furthers the importance of lifestyle in cancer survival (World Cancer Research Fund, 2018). It seems that many people with cancer are receptive to advice and support in order to enrich their lifestyle change. However, Menger et al. (2021) suggest that this needs to occur only after a time for reflection, rather than hastily. To this end, they suggested that rumination and reflection in facilitating a healthy lifestyle post-cancer needs to be further explored. Finally, does this change only cover the five aspects or domains as mentioned in Tedeschi and Calhoun (2006)? Besides the already mentioned domains, an investigation of PTG among cancer patients in Italy resulted also in a sixth factor labeled as the 'time dimension' (Fiorette et al., 2022).

A number of gaps in literature exist. Casellas-Grau, Ochoa, Ruini (2017) found that despite the huge interest in research investigating PTG among oncology studies in recent years, most of those studies have used quantitative methods. Also, Menger et al. (2021) found that the qualitative literature in this field has been somewhat biased towards the investigations and interpretation of the lived experience of positive change post-cancer. Moreover, the authors found large discrepancies on data collection methods, lack of methodological details, and time since diagnosis, amongst others. Finally, one must caution that the majority of related studies may suffer from cultural limitations, as cultural factors may indeed influence PTG research (Cormio, Romito, Giotta and Mattioli, 2015).

The primary aim of this qualitative study was to investigate a) what aspects of PTG can be found in Maltese individuals undergoing treatment for cancer, if any, and b) what it means for them to be diagnosed and live with treatment and beyond cancer. Using a qualitative methodology availed a better grip in understanding more the latent features characterizing this sample.

## **2. Methods**

### *2.1 Participants*

According to thematic analysis guidelines, three types of data collection and sample size of related projects were suggested, namely: small, medium or large. For small projects it was recommended up to 10 participants for interviews (Braun & Clarke, 2013). In this research, deemed to be a small project, we earmarked 10 subjects, with

age ranging from 48 - 81 years old ( $M=64$  years). Six participants were female. Participants were recruited through Hospice Malta, which served as the intermediary in this study. 80% ( $n=8$ ) were undergoing curative therapies (chemotherapy, radiotherapy or immunotherapy), while 20% were undergoing follow-up checks and related vigilance, and prevention therapies.

## *2.2 Procedures*

This study aimed to investigate the perspectives and experiences of adults in view of major crises in life such as those from cancer.

The study data, collected in the last quarter of 2021, utilized a semi-structured interview, which lasted around one hour. Eligible participants had to be Maltese adults, male or female, who were diagnosed with cancer and have or were still receiving treatment for cancer. The study was conducted during the COVID-19 pandemic, which could have had a further impact on the study's results.

Participants were free to choose to participate in the interview using either the Maltese or English language. However, all participants preferred to answer in English. All participants preferred to have the interview at their own homes, at a time of their choosing. Although participants were free to refrain from answering to any subject, none did so. The first author - a psychologist who works with individuals, couples and families - conducted all communication with the participants. He has ample experience with individuals facing various trauma. Empathic responses together with open-ended questioning aided the flow and safety of participants' responses to the interviews, in that more focus on meaningful data could result. All participants expressed their satisfaction at this study, mentioning that the experience was a positive one, despite their difficult times. Furthermore, many voiced their gratification that results from this study could potentially assist other individuals in similar circumstances. To them, this was a meaningful experience in its own right. Each time emotional pain was noted during any of the interviews, supportive comments were offered.

## *2.3 Measure*

The research tool queried respondents about the meaning of cancer to them, changes they had to go through as they learned of their diagnoses and prognosis, how it affected them personally, emotionally, spiritually, financially and socially, amongst other facets. Questions about what it means to be a cancer survivor, adjustment/s required in life, how treatment affected them (and/or still does), their quality of life, and changes and severity in the disease itself were asked. Interviews focused on potential changes felt by participants, prior to, during, and after diagnosis, and what other changes, if any, have ensued thus far. Participants were offered the opportunity to present any suggestions or recommendations they wished to pass on to others faced by similar challenges.

## *2.4 Data Analysis*

Thematic Analysis was the approach chosen for this study in order to identify, analyze and report patterns within data, according to Braun and Clarke (2013). It is a flexible analytic method that allows for meaningful and rich description of data. A process of coding in six phases was done to create established and meaningful patterns, namely: 1) familiarization with the data collected (transcribing data and noting initial ideas), 2) generation of initial codes (coding interesting features of data), 3) searching for themes among codes (collating codes into potential themes), 4) reviewing themes (gathering a thematic "map" of analysis), 5) defining and naming themes (refining specifics of each theme), and 6) the construction of the final report. After the collection of the data, narratives were analyzed in view of Braun and Clarke (2006) thematic analysis. Consequently, the theoretical approach guiding this analysis was the post-traumatic growth theory, as constructed by Tedeschi and Calhoun (1996) in their development of the PTGI.

## *2.5 Ethical Approval*

Eligible participants were contacted by the intermediary, who explained the nature of the study, and handed to those interested an information letter and a consent form. Interested participants contacted themselves the researcher, with whom a face-to-face interview was scheduled, at a place and time of their own preference. Participants were assured that the study would be anonymous and confidentiality will be strictly maintained. They could withdraw from the study at any time, with no adversarial effect. Finally, should the need arise, participants were given psychological assistance at no cost to them. The study had all ethical clearance from the University of Malta - Faculty of Health Sciences Research Ethics Board (UREC Form V\_NOV2018 652). The study was not funded.

## **3. Results**

Table A shows the demographics of the sample in this study.

The factors of the PTGI were articulated in the results' narrative.

### 3.1 Seizing the 'now' - Appreciation of Life

Two sub-themes emerged under this dimension: appreciation of the moment and gratefulness for having one's own family and children around, who themselves become a core motif to the will to live, despite the costs involved.

Being first diagnosed with a serious illness is surely a shock to most people. However, going through this ordeal may also produce a number of unexpected realities, including an appreciation of the here and now. For Patient 1, being diagnosed with cancer was a huge shock, which is a very normal reaction, which challenged all her long held beliefs and assumptions. To her, that was a long and lonely period of solitude, where she felt as if free falling. Only later, when she started accepting her reality, she felt an inner drive to seize the 'now', almost to stop the clock: *'Before, I lived for the future. Now, I live for the here and now!... So I try to seize the 'moment'* (Pt1-03-20). In line with this, to Patient 7, it seemed that he was going to perish even *'before my biological death!'* (Pt7-299-06).

Moreover, having dependants, especially children, becomes a key motive to live for: *'My children have always been my motive to keep fighting, no matter what... (Pt7-301-11)*. Seeing one's own offspring grow, mature and settle in life remains the dream of most, as patient 5 highlighted: *'...but I will never let it have the better of me... it won't destroy me... I keep dreaming of seeing them (my children) settled...'* (Pt5-209-09). In very clear words, Patient 7 frankly explained:

*'In my heart, I reasoned that my husband, somehow, will move on...but my children are still too young, dependent... that motivated me greatly...'* (Pt7-295-20). According to Patient 4: *'God forbid if they were not there...'* (Pt4-133-55).

Table 1. Participants' demographic information.

#### Demographic Characteristics

Participants	Age	Illness	Time since (yr/mo)	Dx	Treatments Status	Marital Status	Vocational Status
1 F	48	Ov/Breast	2yo 1mo		1	Single	notary
2 M	81	MSS	6yr 5mo		1,2	Married	retired
3 M	56	Liver	3yo 3mo		1,2,4	Married	manager
4 F	81	Ovarian	7yo 1mo		1,3	Married	retired
5 F	69	Metastasis	25yo 3mo		1,2,5	Married	housewife
6 F	52	Metastasis	2yo 9mo		1,2	Married	housewife
7 M	67	Bone	3yo 2mo		1,4	Sep.	retired
8 F	67	Bone	3yo 2mo		1,2,4	Married	housewife
9 F	50	Breast	3yo 11mo		1,2,3	Married	clerk
10 F	65	Breast	2yo 5mo		1,3	Widow	housewife

Treatments: 1=Chemotherapy; 2=Radiotherapy; 3=Mastectomy; 4=Immunotherapy; 5=Other

### 3.2 Quality, Not Quantity - Stronger Interpersonal Relationships

When illness strikes, one may appreciate those around who persist in assisting despite all the challenges involved. A deeper sense of closeness is born. Interpersonal relationships can become even more meaningful, whereby one focuses and prioritizes *'quality, not quantity'* of friendships (Pt10-398-02). The irony is that during times of ill and crisis, one will undoubtedly realize who the real friends are.

For Patient 3, *'...this illness... brought us closer to each other...'* (Pt3-90-23), while for Patients 2 and 5, having their spouse always at their side was truly a blessing: *'my wife is like my angel...she's always there for me...'* (Pt2-38-04). This constant in patients' life energized them to persist on treatment and their changes to their lifestyles, never to let go: *'I found my sister and my children (always there for me)... their hug means so much...I always found support from my family and still do...my love towards my children and husband, and my family as a whole, never waived. It has always instilled in me a new vigor to keep moving on...'* (P9-365-20).

Patient 3 appreciated the presence and vulnerability of his family around, understanding the challenges they endured in adjusting to his own illness. Thus he hid his own emotions so as not to burden them even more: *'I try not to cry in front of them, or when my kids are present...they are still young...I don't want to burden and worry them with my troubles...'* (Pt3-101-19). Some people may even live deprived themselves, so as to ascertain that their children are content in life, as Patient 6 noted. In line with this, some may refrain from meeting people due to the suffering experienced, besides the fact that they could not wish them be seen in that state for obvious reasons:

*'Yes, pain can be unbearable...at times I slept on the sofa...you know, suffering is a very personal experience...I did not have a good experience with chemo, ... I never wanted people to see me in that awful state...'* (Pt6-260-16).

Empathy is another area that was noted from the results. It is human experience that shows that the experience of pain and suffering may either make one more empathic and attentive to the burdens carried by those around, or become more distant. Participants in this study narrated how their own personal experience of pain helped them not to become bitter, but rather open up for others' difficulties and challenges. Patient 1 pointedly reflected on this clearly: *'my own journey with serious illness made me more aware of problems endured by others... So now, I try to volunteer at the nearby hospital... being present to those bed-ridden, and perhaps sharing a smile...'* (Pt1-11-29).

Recognition of interpersonal relationships brought patients to strive for new social routines, even if different from their past. Patient 5: *'Yes, we do go out, socialize, as a family... true, not like before, because things have indeed changed...but at least we try to retain some normality, routine...'* (Pt5-220-17).

### 3.3 Richer Transcendence

Transcendence links the person to beyond his or her confines, to one's deity and to others. This was noted from the results in two different ways: more realistic faith and a deeper altruistic concern. *'I started praying more, more focused and with vigor...not as before, which was more parrot-style...'* (Pt1-13-55) said Patient 1.

A deep sense of gratitude was found among patients with serious illnesses: *'God remains the most important thing in life...am I angry at God? Definitely not. (emotional tone). I speak to God all the time...I was never indifferent to God...and to others like me, I tell them to take everything from God's hands...'* (P2-44-09).

A deeper sense of faith indeed does not come about without a roller coaster of emotions, and thus results in a more realistic faith. Patients did mention feelings of anger, frustration, desperation but also inner peace, awe and serenity, in their journey with the new changes. Participants did question the perennial 'why?' and 'why me?' questions. However, those were not the conclusion of their earnest fought demands and process, as remarked Patient 9. The stronger faith moves the individual to a different form of prayer, or communication with one's God: *'when in pain, I call God... not read prayers, but pray, in earnest...there are times I get angry at God, sure...'* (P5-210-10).

Altruistic concern is another venue that a deeper spirituality may lead to. Such concerns were identified a) in prayer (eg. *'I prayed to God that my children will settle down, and I told him that I was not ready to leave, before then, and my prayers were heard'* (P7-298-19); b) in challenging our own focus (*'when exposed to the medical problems of others, ours can be much smaller...this is where my faith empowers me...'* (Pt6-280-06); and c) in still trying to be of assistance to others, despite one's own limitations (*'life has to go on...self-pity is destructive...engaging with others, within my limits, helped me share my bit, to help them in their own circumstances'* (P1-14-33).

### 3.4 Metamorphosis - New Prospects

Patient 1 encapsulated this next domain, when she defined the cancer experience as a 'metamorphosis'. *'Cancer is identified with changes, some that are external and observable, like losing your hair, finger-nails, etc. Others are more pronounced, perhaps because they are internal, more secret, such as 'the challenge to one's own identity, accepting the long and arduous journey of therapy, talking openly about my reality with others, my own confusion of fear about the future, the unpredictable nature of this illness... whether you like it or not, you let go of the old dress, to enter a completely new one...cancer can kill you physically, but also morally as well'* (P1-09-90).

New possibilities may demand a drastic change in one's lifestyle. Patient 1 highlighted this point clearly: *'Cancer is a sentence... I had to make many changes, and still do, to my lifestyle, diet, things I enjoy doing in my leisure, and so on... having cancer is like a shock, it limits one's lifestyle in various ways, true, but life must go on...'* (Pt1-15-26). For Patient 8, a new lifestyle meant a *'...huge change and more healthy diet, new sleep patterns, changes in certain routines, hobbies... and above all, a lot of self-discipline...'* (Pt8-339-06).

Keeping oneself busy, and positively alienated, was another area that helped participants move through this metamorphosis. Patient 7 found positive alienation through work:

*'Work has proved to be a great alienation to me...which I required so much... it gave me a great alternative, and it boosted my self-esteem, which was severely tarnished by cancer...(Pt7-311-19).*

Maintaining a positive outlook is crucial in this challenging metamorphosis. One tool to use for self-help is through positivity. When faced and challenged by a serious illness, being complacent is simply not an option. Neither is it to be seized by negative thinking, even if there is a price to pay. As patient 6 noted, *'it is costly... life is worthed. I do have thoughts, and sometimes sleepless nights. True, I think about the future, and the future of my children, sure I do, but push myself to move on...I will not let myself sink in the worry, that's unhealthy...'* (Pt6-281-09).

### 3.5 Personal Strength

Personal strength requires the will and perseverance to face facts and be realistic, particularly in times of crises. Four themes highlighted this aspect: self-efficacy, creativity, adjustment and holding on to a new perspective.

Self-efficacy is the ability to keep going despite all challenges and difficulties. Cancer is one such scenario. But as Patient 1 clarified, this illness *'can kill you physically, but also morally'* (Pt1-22-39). The choice is one's own. Clearly *'life has to go on, no matter what'* (Pt8-340-21), as Patient 8 kept on hammering in her interview. Complacency is simply not an option! *'I believe it all sums up to one question: 'am I ready to accept what it takes, and move on, or stop, and start dying?'* (Pt6-259-11) as Patient 6 noted. Following doctors' and other health care professionals' order and counsel was one required step along this journey, an element reflected among all participants in this study.

Creativity is another area that personal strength taps into. This encourages a person to re-invent themselves. *'...someone once asked me to go and socialize with other older persons in the village square, you know...but between us, I don't encourage myself much when looking at many of them...not much of a motivation believe me...so I better create better ones myself that are more reassuring'* (P2-44-21). He thus finds it more appealing to do volunteering. Moreover, engaging in hobbies was another aspect mentioned in the narratives, such as swimming for Patient 9, or tennis for Patient 8: *'Before I used to play tennis, now, at least, I follow it on tv...I still buy the daily newspaper to keep up to date with what's going on...I feel I am a fighter, never losing heart, keep trying, even if now I have changed a lot...'*(Pt8-350-07). Patient 8 went on to show me a large room full with his favorite Royal Navy ships, some of which represent those he had even worked on, while during his service time in the UK.

Personal strength demands constant adjustment. One's own past may empower the individual in fighting the present battles. For Patient 8, it was painful to slow down from an avid swimmer to the present, but still, he persists in his hobby, even if cut down from what it used to be: *'...before I used to go swimming regularly, but lately, I had to slow down... When I was taking chemo, I still used to go out, even driving...you know what, you fight today's battles with the past luggage and resources you equipped yourself with - that's my belief.'*(Pt8-352-34).

Together with adjustment, fighting a serious illness requires also to restructure one's life. Mobility is an area that could easily challenge a person because of cancer: *'... to me, it was so cruel not being able to drive...'* (Pt7-299-03). To Patient 2, this loss of independence was addressed proactively, rather than passively: *'to lose a substantial part of your independence is hard...at that time, I decided to give away my car, rather than leave it in my garage, thereby limiting that temptation...so I gave it away, for free.'* (Pt2-51-06).

Finally, personal strength challenges the person to maintain a wider perspective. For Patient 5, keeping oneself busy and occupied was very crucial:

*'I try to keep myself busy and positive, all the time...I try to do whatever I can...even before you came, I was washing the floor...there are good times and bad ones too...at first I was in denial, and did not want to communicate with anyone... then, I learned to accept and be more open about it, and it helped...'* (Pt5-233-19).

Patient 1 opined that being diagnosed with cancer made her believe of having a new and foreign reality within her, as if possessed, that she wanted so desperately to escape from... *having a past in which you took a proactive role in fighting past battles helps a lot. Being overly sensitive is not helpful. Cancer is a very hard battle, very personal...you can't stop living...so my doors to the world out there have to remain fully open...This made me keep my resolve throughout. My belief is that even if I will die of cancer, at least, I die on my own terms, not desperate or engulfed with rage and remorse...'* (Pt1-24-51).

Facing an existential trauma such as cancer can be taxing on a number of fronts: letting go slowly of some personal independence (*'even for getting a glass of water'* - P2-77-06); in the direct consequences from the treatments taken such as losing one's fingernails, hair, losing certain faculties like kneeling, constant fatigue and weariness. The never-ending battle was mentioned across the board by all participants. For Patient 6, whose cancer illness re-emerged after 9 years, it was very clear to her: *'...I don't use self-pity, that's destructive...what you need is to keep alienated, positively alienated and keep yourself on the go...'*(Pt6-271-18). It may require one not to be naive,

but always be on guard, always on alert. On the other hand, not knowing what the future may bring, was also noted as positive. As Patient 5 said, this uncertainty readies a person to never be complacent, never get caught unprepared.

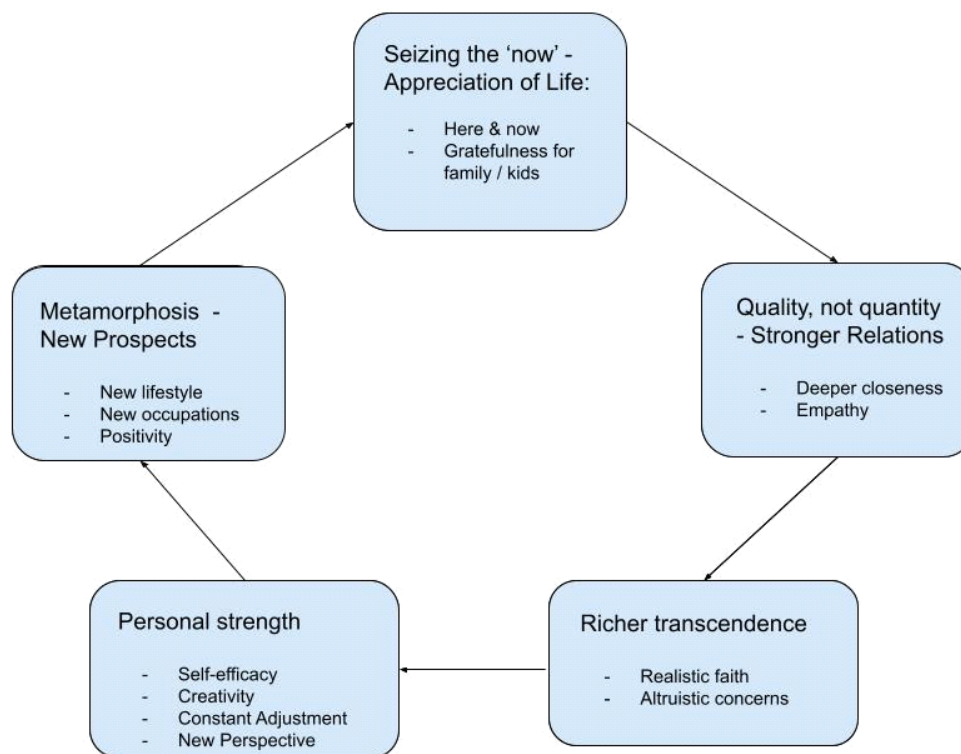


Figure 1. Five aspects of PTG of cancer survivors

## 4. Discussion

### 4.1 Discussion of Key Findings

Because breast cancer may lead most research on serious illness trajectories (Menger et al., 2021), it was our intention to include other cancer types and/or serious illnesses, as research on these realities may be lacking.

Our analysis highlighted all outcomes of PTG. Appreciation of Life appeared through two sub themes, namely a) gratefulness of the here and now, with a heightened sense to seize the moment; and b) acknowledgment of one's own children, who themselves become a core motif to the will to live, despite the costs involved. Trauma work is a search for meaning, according to Tehrani (2004), which in turn brings about more appreciation of the present, the here and now, while valuing significant others as gifts to promote further this. Accordingly, Strang and Strang (2001), meaningfulness becomes central for quality of life.

Interpersonal relationships resulted also from two other sub themes. First, prioritizing deeper closeness among family and friends. This may also entail protecting them from unnecessary burdens and establishing new and different social routines. Secondly, going through the process of serious illness may enhance empathy towards those in similar circumstances. According to Vartak (2015), hope and social support have a positive statistically significant impact on the resilience of cancer patients. In fact, social support can serve as a protective factor for hopelessness (Yesilot et al., 2017). In a similar vein, Tagay et al. (2007) emphasized the fact that low social support risks greater vulnerability to mood disorders.

Richer spirituality was illustrated in two sub themes. First, a more realistic faith, born from a personal existential struggle. This provided the participant a journey with a more personal and in depth contact with one's deity. Finally, an altruistic regard that goes beyond one's own needs and concerns. Galea (2017) identified spirituality and personality as predictors of happiness. Furthermore, in a similar study, spiritual and psychological components buffered the trauma involved in child maltreatment (2018). Spirituality may play a leading role in suffering not because it reduces suffering per se, but for presenting a meaningful perspective through which pain can be more easily borne (Baumeister, 1991).

Metamorphosis or new possibilities were drawn from three sub-themes. First, a serious illness can challenge an individual to choose a new and healthy lifestyle. Next, new occupations may open further one's horizons of opportunities, despite the difficulties endured. Finally, maintaining positivity and a relentless approach to life raises one's hope to a more holistic life. Tugade et al. (2004) found that positive emotions can be an important factor that buffers individuals against maladaptive health outcomes. It was noted that finding ways to cultivate meaningfulness and positivity corresponds to optimal physical and psychological functioning. Park et al. (2008) found that meaning making efforts relate to better adjustment. This develops through a sequence of adaptive meanings made from facing the experience of serious illness.

Four sub themes pointed at personal strength as reported by the participants in this study. One, survivors reported feelings of self-efficacy empowered through a realistic approach to life in general, and to the illness trajectory in particular. This included also the determination to follow health care professionals' orders and advice to the letter. Two, participants re-invented themselves through hobbies and volunteering. Three, by adjusting to a new reality and restructuring to a new lifestyle. Lastly, holding on to a positive alienation with a wider perspective was deemed important by the participants in enhancing their own personal strength. Seller and Jenewein (2019) outlined a number of factors that promote PTG among cancer patients, from their research, including demographic, personality, social support, spirituality and optimism. Menger et al. (2021) found that most individuals with serious illness are receptive to advice and support if deemed as important to enrich their lifestyle changes, provided that this occurs after a time of reflection.

Research has consistently highlighted the complex reality surrounding cancer, and the many factors that may play a significant part in the positive or negative outcomes, prognosis and holistic wellbeing of patients. These include: gender, ethnicity, and age, coping strategies (Turner-Sack et al., 2012), optimism (Blank & Bellizzi, 2006), hope (Ebright & Lyon, 2002), spirituality (Hunter-Hernandez et al., 2015), pre- and post- cancer reality, socio-economic status, one's own resilience (Seiler, 2019), past endurance of traumas, site of cancer, time since diagnosis (Cormio et al., 2015), social support (Gouzman et al., 2015), feelings involved with having a particular type of cancer (shame, stigma, secrecy, etc.), personality traits (Diehl & Hay, 2013), and cultural factors (Menger et al., 2021), amongst others. According to Aflakseir et al. (2016), psychological hardiness and longer time since diagnosis predicted PTG among cancer patients.

This complicated reality may have even been furthered through the revision of the traumatic criteria in the DSM-5 (APA, 2013), which raises its concern as to how traumatic a cancer illness may in fact be. However, as Andrykowsky et al. (2015) and Mulligan et al. (2014) noted, a cancer diagnosis can potentially amount to an existential threat which in and by itself, serves as a trauma to the individual. Tedeschi and Calhoun (2004) defined PTG as a personal experience with positive psychological changes derived from a major trauma. Accordingly, PTG results when the particular event correlates significantly to enough stress that may crush or seriously threaten one's own quality of life, expectations to even become an existential threat (Calhoun & Tedeschi, 2006). Making meaning out of something so senseless is the work of post-traumatic growth (Collier, 2016).

The results of this qualitative study offer a beacon of aspiration that hope is also a possibility among individuals suffering from cancer. This study's participants offer a potentially positive alternative in view of such serious illnesses as cancer.

#### *4.2 Clinical Implications*

Some clinical implications and recommendations result from this study. First and foremost, treatment of patients with cancer should clearly go beyond medical care. Factors found to contribute to PTG include demographic factors such as gender, age, and socio-economic status, personality factors, such as optimism, positive affect and self-control, social support, adaptive coping skills, optimism, hope, spirituality and coherence (Seiler & Jenewein, 2009). Thus, treating clinicians will do well to blend psycho-social interventions to enhance acceptance of reality against any natural and human defenses of denial. According to Jafar et al. (2021), one psycho-social strategy is the use of acceptance and commitment therapy (ACT), which may potentially facilitate PTG among patients with cancer by specifically enhancing acceptance while minimizing denial. This therapy works in liaison with the five domains noted in Calhoun and Tedeschi (2006).

Positive psychological resources training are thus also called for in order to advance the positive effects and changes of PTG among cancer survivors. Hopefully, through this process, personal growth may be facilitated, which will augur well for a more holistic wellbeing, despite the challenges and existential threats that still accompany such a trajectory.



### 4.3 Limitations

This study offers an initial proof that the traumatic experience of cancer among Maltese individuals can lead to potentially significant domains of PTG. This study aimed at responding in related literature gaps, namely using a qualitative study (Casellas-Grau et al., 2017), with a new cultural sample (Cormio et al., 2015), and finally including a number of varied types of cancers, in view of the existing bias in favor of breast cancer (Menger et al., 2021).

As for limitations, widening the evidence base could highlight novel expressions that may present an alternative approach to growth post-cancer from the current framework. Longitudinal investigations are thus called for to further clarify the timing, influences upon, and trajectories of PTG post-cancer.

### 5. Conclusion

This study charted all key domains of PTG, thus articulating the compelling requirement that treatment of patients with cancer should clearly go beyond medical care. Treating clinicians will do well to blend psycho-social interventions to enhance acceptance of reality against any natural and human defenses of denial.

Furthermore, the use of qualitative research provided a richer investigation into the elements inherent in PTG, in delineating the varied aspects of positive change, despite the challenging negative and positive adjustments in cancer and serious illness trajectories. However, important gaps in literature persist, including cancers with poorer prognosis, and individuals from lower socio-economic strata and cross-cultural groups. Moreover, further explanation and investigation of PTG and resilience continues to be warranted as outlined by Bonanno (2004), in clarifying exactly how positive psychological growth is achieved despite the trauma endured.

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