

**LIFE ORIENTATION AND PERSONALITY ATTRIBUTES: IMPLICATIONS ON POST-
TRAUMATIC GROWTH (PTG) AMONG DIAGNOSED CANCER PATIENTS IN IBADAN,
NIGERIA**

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Abstract

This study examined life orientation and personality attributes determining posttraumatic growth among cancer patients in Ibadan. One hundred and twenty (120) diagnosed cancer patients participated in the study. A structured questionnaire was used for data collection. Hypotheses were analyzed using hierarchical regression. Results showed that age, gender, education, and knowledge of diagnosis significantly predict posttraumatic growth ($F(4, 115) = 2.64, p < 0.05, R^2 = 0.14$). Life orientation, neuroticism, and openness were significant in predicting posttraumatic growth controlling for socio-demographic factors ($F(7, 112) = 3.80, p < .001, R^2 = 0.90$). In conclusion, individuals with terminal illness can still experience growth and psychological wellness despite their traumatic experiences if healthy dispositions such as optimism and emotional stability are developed in them. We recommend involvement of mental health practitioners especially clinical psychologists in the management of patients with traumatic experience in order to assist attain optimal wellbeing.

Key Words: Dispositional Optimism, Personality, Posttraumatic Growth, Cancer

1. Introduction

Cancer is a serious and traumatic event that impacts millions of individuals each year. It is an immutable fact that cancer patients undergo hardships in the cycle of the illness; from excruciating pains to loss of some organs or even their lives (Gurevich, Devins, & Rodin, 2002). It is multiple tragedies for most patients who apart from physical pains, have to contend with its associated psychological problems. The diagnosis and subsequent treatment of cancer can cause negative psychological and physical sequel that can severely impact individuals' everyday lives (Gurevich, Devins & Rodin, 2002).

Although there has been a long history in psychology research examining mental illness, negative emotion, and maladaptive coping associated with chronic health diagnosis, but, little is known about positive human functioning (Seligman & Csikszentmihalyi, 2000). Recently, however, a growing number of social scientists have turned to fill this gap (Seligman, 2002). It is surprising to see efforts that people put together to thrive despite funny stressful events like chronic medical illness. In evaluating cancer-related positive growth, Cordova (2008) cited several characteristics of the cancer experience that may provide opportunities for positive growth. First, after cancer has been diagnosed, there is a threat that the cancer will always be there or that it will reoccur. Second, the cancer experience can change one's life indefinitely. Third, the cancer experience may create a situation where patients are required to rely more on significant others (e.g., partners, friends, family members) for tangible care and emotional support. Subsequently, cancer patients may re-evaluate their relationships. Last, cancer has the ability to call into question one's mortality. As people experience an existential crisis, they may rethink their religious and spiritual beliefs and their beliefs about the world in general. In summary, cancer has the ability to provide opportunities for positive growth.

Posttraumatic Growth (PTG) is defined as a positive psychological change resulting from a traumatic life event (Tedeschi & Calhoun, 1995, 1996, 2004). A variety of cancer patients have reported PTG from their cancer experience including breast cancer (Antoni et al. 2001), prostate cancer (Thornton & Perez, 2006), colorectal cancer (Salsman, Segerstrom, Brechting, Carlson, & Andrykowski, 2008), testicular cancer (Rieker, Edbril, & Garnick, 1985), leukaemia and lymphoma (Daiter, Larson, Weddington, & Ultmann, 1988), cancers requiring a bone marrow transplant (Tallman, Altmaier, & Garcia, 2007) and mixed cancers (Schulz & Mohamed, 2004). Therefore, these suggest that patients from many types of cancer have found Posttraumatic growth from their cancer experience.

Indicators of research in Posttraumatic growth (PTG) presents a situation whereby individuals in the majority suffering significant stressors feels positive personal changes because of the stressor (e.g. Sears, Stanton & Danoff-Burg, 2003), including better interpersonal relationships, greater spirituality, a positively changed life philosophy, positively changed priorities, and a greater sense of personal strength (Thornton, 2002). There is significant conceptual overlapping in this construct which has similar hypothesized constructs like benefit finding (e.g., Antoni et al., 2001) and positive reappraisal coping (e.g., Carver, Scheier, & Weintraub, 1989), and there is some confusion as to whether and how these constructs differ (Sears, Stanton, & Danoff-Burg, 2003).

Based on epidemiological data, approximately 61% of men and 51% of women in the United States report at least one traumatic event during their lives (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). The lifetime occurrence of Post-Traumatic Stress Disorder (PTSD) ranges between 6% and 9% (Kessler, Sonnega, Bromet, Huges, & Nelson, 2005). Thus, the majority of trauma survivors do not develop PTSD; as such, majority findings in likes reported

personal growth in the aftermath of traumatic exposure (Sears, et. al., 2003; Tedeschi & Calhoun, 2004).

2. Review of Literature

2.1 Socio-demographic and PTG

Helgeson, Reynolds and Tomich (2006) found that among the demographical variables that they examined, minority persons were more likely to perceive benefit and meaning from the traumatic event than majority persons. Age has also been implicated to influence the emergence of PTG (Helgeson et al., 2006). Specifically, research found that in a sample of individuals who suffer from breast cancer, younger people were more likely to report PTG than the older people (Cardova, Giese-Davis, Golant, et.al. 2007). Furthermore, research suggests that women more than men engage in the most benefit finding (Helgeson et al., 2006). This finding might be due to gender differences in coping and is in line with a meta-analytical review of the literature on coping, which showed that women employ more positive reappraisal and positive self-talk than men (Tamres, Janicki & Helgeson, 2002). Higher education and employment have also been associated with increased PTG (Linley & Joseph, 2004; Russel, White & White, 2006).

2.2 Life Orientation and PTG

Numerous psychological factors may have been implicated in impacting posttraumatic growth. Ross & Wilson, (2002); Suls, Lemos & Stewart, (2002) all posited that individuals with low self-esteem and depression were identified less likely to invoke cognitive biases i.e. posttraumatic growth, whereas, in the views of McAllister, Baker, Mannes, et.al., (2002); Ross & Wilson, (2002), they opined that those with high self-esteem may be more motivated to invoke cognitive biases, i.e. posttraumatic growth

Sean Ransom (2005) from University of south Florida in his research that involved patients booked for radiotherapy at the H. Lee Moffitt Cancer Center (HLMCC) and James A. Haley VA Hospital (JAHVAH) in tampa, showed that there is existing relationship between optimism and posttraumatic growth. He further revealed that participants who were optimistic in the study reported posttraumatic growth, particularly when race/ethnicity was controlled (Sean Ransom, 2005).

Optimism life orientation was positively related to posttraumatic growth in a sample of patients with HIV (Milam, 2004). However, in the works of Sears et al. (2003), they posited that optimism life orientation has no correlation with PTGI scores in a sample of breast cancer survivors. However, they still found that optimism correlated with benefit finding and positive reappraisal. These two constructs were also found to be similar to posttraumatic growth (see also, Urcuyo, Boyers, Carver et.al. 2005). Since benefit finding, positive reappraisal, posttraumatic growth, and related terms have often been used interchangeably (Thornton, 2002).

Furthermore, optimism was also highly correlated with PTG, including significant associations with subscales of Posttraumatic Growth Inventory (PTGI) such as Appreciation of Life, Personal Strength and even total PTGI (Harrington, McGurk, & Llewellyn, 2008). Correlation findings between life orientation and posttraumatic growth are consistent in previous researches with head and neck cancer patients in which optimism was found to be a predictor of PTG than pessimism (Harrington, et al. 2008). Similarly, PTG subscales were all found to be significantly associated with optimism as measured by the Life Orientation Test (LOT) among former Vietnam prisoners of war (Feder, Southwick, Goetz, et al. 2008) and patients diagnosed with breast cancer (Antoni, et al. 2001).

2.3 Personality Characteristics and PTG

Helgeson, Reynolds, and Tomich (2006) found that two personality types, optimism and religiosity, are associated with PTG. Since the defining feature of optimism is to have a positive outlook in life, it is not surprising that this personality trait has been found to be related to benefit finding (Helgeson et al., 2006). The personality traits of extraversion, openness to internal experience and conscientiousness were also found to be significantly correlated with PTG (Evers, Kraaimaat, Van-Lankveld et al., 2001)

The process of the development of posttraumatic growth begins by first examining individuals' personalities pre-trauma and exploring how these personality factors may affect their initial response to the trauma (Tedeschi & Calhoun, 2004). Specifically, Tedeschi and Calhoun (1996) administered the NEO-PI and the Posttraumatic Growth Inventory (PTGI) to 325 undergraduate students in an introductory psychology course. It was concluded that extraversion and openness to experience were statistically significantly related to one's experience of posttraumatic growth.

Other research findings recommend that certain personality characteristics seem to be related to posttraumatic growth, most consistently, optimism (Evers et al., 2001; Updegraff, Taylor, Kemeny & Wyatt, 2002). Posttraumatic growth relationship with neuroticism is unclear, as there has been ambivalence findings in the outcome of the relationship. Some research outcomes showed significant negative association, while other findings revealed no significant relationship (Evers et al., 2001; Helgeson et al., 2006; Stanton et al., 2006).

2.4 Purpose of Study

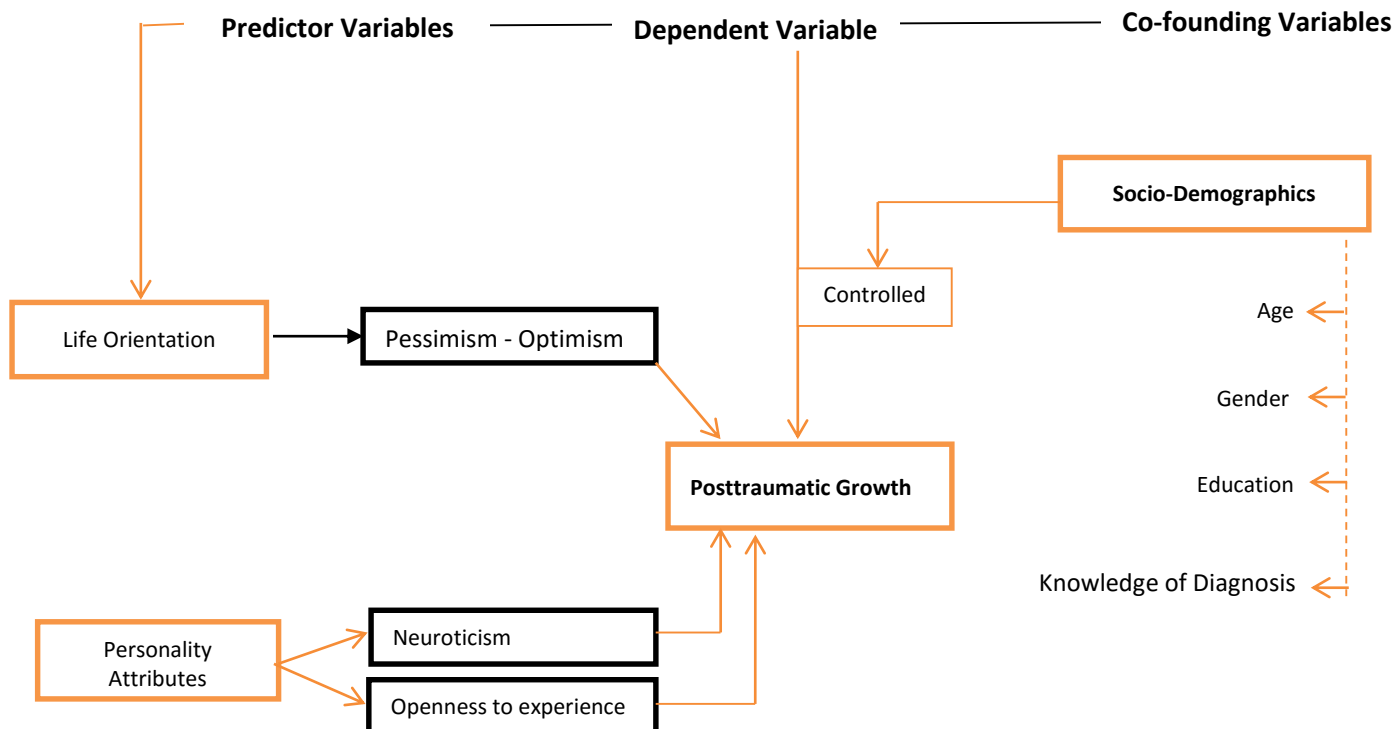
The objective of the study is to determine the predictive impact of life orientation and personality attributes on posttraumatic growth among diagnosed cancer patients in Ibadan, Nigeria.

The study specific objectives are to;

1. Establish the predictive impact of socio-demographic variables (age, duration of illness, level of education) on Posttraumatic growth.
2. Examine the predictive impact of personality attributes and life orientation on posttraumatic growth, controlling for, and the influence of socio-demographic variables.

2.5 Conceptual Framework

The developed conceptual framework proposed that Life orientation, personality attributes significantly determine posttraumatic growth among cancer patients, controlling for the co-founding influence of socio-demographic variables.



3. Methods

3.1 Research Design

The study adopted expo-facto research design. The research design enable researcher to establish the predicted influence life orientation and personality attributes have on posttraumatic growth among sampled population after the diagnoses of cancer disease.

3.2 Study Area

Ibadan was the study area for the present study. Ibadan serves as the capital of Oyo State, It is also the third largest metropolitan area after Lagos and Kano in Nigeria with a population of 1,338,659 according to the 2006 census. Ibadan is located in south-western Nigeria. Ibadan had been the center of administration of the old western region since the days of the British colonial rule.

3.3 Settings

The study was conducted in University College Hospital, Ibadan. Selection of the participants were based on the study parameters, accessibility and managements' consent. The establishment of the University College Hospital was sequel to an act of parliament in November 1952 in response to the need for the training of professionals for the country and the West African sub region. In 1951, a visitation panel was set up to assess the clinical facilities for the clinical postings of medical students registered for M.B.B.S degree of the University of London. The University College Hospital is strategically located in the city Ibadan, then the largest city in West Africa which is also the seat of the first University in Nigeria.

3.4 Study Population, Sample and Sampling Technique

The population for the study was the attendees (cancer patients) of the radiotherapy units, Surgical Out-patient, and Palliative health care units of the University College Hospital, Ibadan, Nigeria. The sample for the study were one hundred and twenty cancer patients who met the inclusion criteria for the study. Purposive sampling technique was adopted for the study. The inclusion-exclusion criteria for the study are;

- Patients in the University College Hospital diagnosed and being treated of cancer.
- People above 18years of age
- Participants who sign and return informed consent form given to them by the researcher.

3.5 Participants

One hundred and twenty participants (120) were used in the study. 52 were males (43.3%) and 68 females (56.7%). 8 participants were identified as single (6.70%) by marital status, 73 participants as married/cohabitating (60.8%) and 39 participants identified to have either divorced/widowed (32.5%). 9 participants fell into the age range of 19 to 30 years (7.5%), 54 participants were identified with age range of 31-50 years 45.0%, while 57 participants in the study were categorized as above the age 50years (47.5%). Educational distribution among the participants showed that 14 participants of the respondents were unable to complete their secondary school education (11.7%), 25 participants were secondary school certificate holders (20.8%), 24 respondents were OND/NCE certificate holder (20%), while 22 respondents in the study identified themselves as undergraduates or university/polytechnic dropped out (18.3%), 32 respondents were identified as B.Sc./HND holders (26.7%), while 3 respondents are found to have obtained higher certificate of either PGD/M.SC/Ph.D. (2.5%).

3.6 Instruments

Structured questionnaires were used to collect data in the present study. The questionnaire is made up of three sections. Section A elicited socio-demographic data, section B measured the respondent's life orientation, section C measures personality profile of respondents focusing on Neuroticism subscale, and psychoticism subscale, while the section D measures the posttraumatic growth of the participants.

The LOT-R (Scheier, Carver, & Bridges, 1994), a self-report scale with 10 items, was used to measure optimism. Four items were filler items (e.g., “it’s easy for me to relax”) and six items contributed to the optimism score (e.g., “in uncertain times, I usually expect the best”). Each item was rated on a 5-point Likert scale (0 = “I disagree a lot”, 4 = “I agree a lot”). An acceptable level of internal consistency was demonstrated by Cronbach's alpha reported by Scheier et al. (1994) of .78. Test-retest reliability correlations ranged from .56 to .79. Both convergent and discriminant validity have been demonstrated (Scheier et al., 1994). Life Orientation Test (LOT) has been described as the most frequently used measure for assessing optimism and has been deemed a scale of choice for assessing hope and optimism (Steed, 2002). The LOT-R has been used in research with cancer survivors (e.g., Schou, Ekeberg, Karesen, & Sorensen, 2008; David et al., 2006). Cronbach's alpha for the current study was .82.

The BFI (John, Donahue & Kentle, 1991) is a 44 – item inventory that assesses personality on a five dimensional perspective. This perspective shows that personality characteristics can be resolved into five broad dimensions which are peculiar from one another. These five areas of BFI are extraversion, neuroticism, agreeableness, openness to experience, and conscientiousness. The original psychometric properties for Americans sample was provided by John et.al, (1991), while Umeh (2004) provided the psychometric properties for the Nigerian sample. The coefficient of

reliability provided by John et al. (1991) are Cronbach's alpha .80, test-retest reliability .85. The mean convergent validity coefficient of BFI are .75 and .85 in addition to the Big Five Instruments co-authored by Costa and Mc Crae (1992) and Goldberg (1992) respectively. Umeh (2004) obtained divergent validity with University Maladjustment scale (Kleinmunt, 1961), they are Extraversion .05, Agreeableness .13, Conscientiousness .11, Neuroticism .39, and Openness .24.

The PGI (Tedeschi & Calhoun, 1996), a self-report scale with 21 items measuring positive outcomes for those who have experienced traumatic events was used to examine positive changes following a diagnosis of breast cancer. Internal consistency reported by Tedeschi and Calhoun (1996) was $\alpha = .90$. For the five factors, internal consistency was found as follows: new possibilities = .84, relating to others = .85, personal strength = .72, spiritual change = .85, and appreciation of life = .67. Test-retest reliability over 2 months was tested with a resulting $r = .71$. The PGI has been used in previous research with breast cancer survivors (e.g., Cordova et al., 2007; Bellizzi & Blank, 2006). For the current study, Cronbach's Alpha was .96. The reliability for the five factors was as follows: relating to others = .92, new possibilities = .88, personal strength = .86, spiritual change = .82, and appreciation of life = .89

3.7 Procedure

Ethical approval was obtained from the Ethics Committee of the University College Teaching Hospital. An introduction letter was also collected from the Department of Psychology, University of Ibadan to introduce the researcher to both Ethical committee and the research participants officially for research ethical compliance in due process. Informed consent forms which explained the purpose and procedure of the study were given to participants. The researcher also explained further the purpose of the study to the participants. Data was collected with the use of questionnaire. The questionnaire which comprised the demographic information, life orientation

scale, personality scale and post traumatic growth scale took about 25 minutes to complete. A member of staff in the radiotherapy department assisted the researcher in the administration of the questionnaires. Questionnaires which have been responded to, were collected back immediately by the researcher.

4. Results

4.1 Hypothesis One

Hypothesis one stated that socio-demographic variables (age, gender, education, knowledge of diagnosis) will jointly predict posttraumatic growth significantly among cancer patients. The hypothesis was tested using hierarchical regression. This result presented in block 1 of table 1 showed that socio-demographic variables (age, gender, education qualification, and knowledge of diagnosis jointly and significantly predicted posttraumatic growth among cancer patients ($F(4, 115) = 2.64, p < 0.05, R^2 = 0.14$). This further implies that socio-demographic variables imputed in block 1 contributed 14% variance observed in posttraumatic growth among participants in the study. The hypothesis stated was therefore accepted. However, the results in the table showed that age ($\beta = .12; P > .05$) and education ($\beta = -.07; P > .05$) do not independently predict posttraumatic growth significantly among cancer patients, while gender ($\beta = .13; P < .05$), and knowledge of diagnosis ($\beta = .13; P < .05$) independently predicted posttraumatic growth significantly, such that the longer the knowledge of cancer diagnosis, the higher the posttraumatic growth of participants.

Table 1

Hierarchical Regression showing predictive impact of Life orientation, and Personality Attributes on Posttraumatic Growth

	B	SE (B)	B	R	R ²	ΔR	F ²
BLOCK 1				.38	.14	.88	2.64*
Age	5.24	4.58	.12				
Gender	7.12	5.12	.13*				
Education	-1.38	1.83	-.07				
Knowledge of Diagnosis	4.87	3.49	.13*				
BLOCK 2				.95	.90	.89	3.80***
Age	2.14	1.72	.05				
Gender	0.23	1.85	.00				
Education	1.10	0.68	.06				
Knowledge of Diagnosis	0.82	1.25	.02				
Life Orientation	0.18	0.18					.52***
Neuroticism	1.31	0.22					.46***
Openness to experience	0.02	0.10	.01				

*p < 0.05, ***p < 0.001

4.2 Hypothesis Two

Hypothesis two stated that life orientation and personality attributes will jointly predicts posttraumatic growth significantly among cancer patients, controlling for, the impact of socio-demographic variables. The hypothesis was tested using hierarchical regression. This result presented in block 2 of table 1 showed that life orientation, and personality attributes jointly predicted posttraumatic growth significantly among cancer patients ($F(7, 112) = 3.80, p < .001, R^2 = 0.90$). However, reflected variables in block 2 (socio-demographic factors, life orientation, & personality attributes) contributed 90% variance in posttraumatic growth experienced of the participants in the study. Controlling the variance caused by the socio-demographic variables in block 1 (age, gender, education & knowledge of diagnosis), which might serve as co-founding variables, the variance observed in block 2 was deducted from the variance in block 1 ($R^2 = 0.90 - 0.14 = .76$). Therefore, life orientation, and personality attributes are strictly responsible for the

76% variance observed in posttraumatic growth among cancer diagnosed patients. The hypothesis stated was therefore accepted. In addition, life orientation ($\beta = .52$; $P < .001$) independently predicted posttraumatic growth significantly, such that the higher the scores of respondents on life orientation scale (optimism), the higher the growth to posttraumatic experience. Neuroticism personality attributes ($\beta = -.46$; $P < .001$) independently predicted posttraumatic growth significantly, such that the lower the scores of respondents on neuroticism subscale, the higher the growth to posttraumatic experience. Openness to experience ($\beta = -.01$; $P > .05$) do not independently predict posttraumatic growth significantly among cancer patients.

5. Summary

5.1 Discussion

The present study examined the existing relationship between socio-demographic variables and posttraumatic growth and the implication of life orientation and personality attributes on posttraumatic growth, controlling the influence of socio-demographic variables among cancer patients in Ibadan, Nigeria. It was established that life orientation and personality attributes (neuroticism & openness to experience) jointly predict posttraumatic growth, having control for the influence of socio-demographic variables.

Life orientation was revealed to have independently impacted posttraumatic growth among cancer patients in Ibadan, Nigeria. Similarly, it was found by Sean Ransom (2005) that life orientation contribute a huge impact on posttraumatic growth cancer patients booked for radiotherapy at the H. Lee Moffitt Cancer Center (HLMCC) and the James A. Haley VA Hospital (JAHVAH) in Tampa, having controlled the possible co-founding influence of race/ethnicity. The current study also aligned with findings that reported that the higher the scores of respondents on

life orientation scale (optimism), the higher the growth to posttraumatic experience (Sean Ransom, 2005; Milam, 2004).

Neuroticism was also implicated to determine significantly posttraumatic growth among cancer patients. It was similar to the findings of Tedeschi & Calhoun, (1996) that had reported that personality has a strong significant correlation with posttraumatic growth. Openness to experience was found not significantly related/predict posttraumatic growth among cancer patients. It was similar to the findings of Tedeschi & Calhoun, (1996) whose had reported that personality has a strong significant correlation with posttraumatic growth. It was as well concluded in the study conducted by Tedeschi & Calhoun, (1996) that extraversion and openness to experience were statistically significantly related to one's experience of posttraumatic growth.

It is recommended that similar future studies should consider encompassing more psychological variables that might impact posttraumatic growth, for there has been fewer studies on posttraumatic growth determinants among people with terminal illness unlike studies on posttraumatic stress disorder (PTSD). Furthermore, expatriates saddled with the responsibility of terminal illness management (e.g. cancer) should engage the services of other professions that deals with emotion and behavioral management, for if more days cannot be added to life, more life can be added to days by enhancing positive growth of posttraumatic through the service of clinicians, such as, clinical/health psychologists.

5.2 Conclusion

The present study investigated the implication of life orientation and personality attributes on posttraumatic growth, controlling the influence of socio-demographic variables among cancer patients. From the findings of the study it was established that established that haven held constant the influence of socio-demographic, life orientation and personality attributes (neuroticism & openness to experience) jointly influence posttraumatic growth among cancer patients.

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