

TITLE OF PAPER : Influence of Personality traits on Posttraumatic growth: A study of Adult Outpatient Clinic, Igbobi Orthopaedics Hospital Lagos, Nigeria

Akinwale, Gbenusola Abike.
Department of Psychology
University of Lagos.
gbenuadunola@yahoo.com

Akinsola, Esther Foluke.
Department of Psychology
University of Lagos.
foluk6@yahoo.com

Muhammad-Bashir, Alli.
Department of Psychology
University of Lagos.

Abstract

The study examined the influence of personality traits, gender and religious affiliation on posttraumatic growth among some adult outpatients of Igbobi orthopedics hospital in Lagos. The study was survey which employed purposive and ex-post-facto sampling techniques. The population consisted of adult outpatients of Igbobi orthopaedics hospital who were recovering from traumatic event of accident. The study sample consisted of 59 outpatients (34 males and 25 females) within the age range of 18-74 years and a mean age of 18.76years. The instrument used for data collection consisted of Personal Data Questionnaire (PDQ); Posttraumatic Growth Inventory (PTGI) and Big Five Inventory (BFI). Data were analysed using both descriptive and inferential statistics. Results showed that participants with personality traits of Openness to Experience, Agreeableness, Conscientiousness, and Extraversion have significantly greater posttraumatic growth than participants possessing the Neuroticism personality trait. Female participants indicated significantly greater posttraumatic growth than their male counterparts. Also, religious affiliation (that is whether being a Christian or Muslim) does not have any significant influence on posttraumatic growth. The study concluded that some personality traits (specifically, Openness to Experience, Agreeableness, Conscientiousness, and Extraversion), and gender played significant roles on posttraumatic growth.

Keywords: Posttraumatic growth, Outpatients, Personality, Religious Affiliation and Gender

INTRODUCTION

Highly stressful events or major life traumas (such as serious illness, road & domestic accident, death of a relative or loved one, unemployment, divorce, etc.) can lead to a variety of behavioral, psychological and emotional negative outcomes which could be a disruptive condition (Taku, Cann, Tedeschi, & Calhoun, 2009). Moreover, there is a growing body of literature suggesting the existence of perceived positive outcomes in the aftermath of a traumatic event (Park & Helgeson 2006; Tedeschi & Calhoun, 1996).

These positive changes have been characterized through several concepts in the literature, namely: posttraumatic growth, stress-related growth, benefit-finding, perceived benefits, thriving, positive by-products, stern conversion, positive psychological changes, flourishing, positive adjustment, and positive adaptation (Helgeson & Helgeson 2006; Linley & Joseph, 2004; Tedeschi & Calhoun, 2004).

Posttraumatic growth (PTG) is the most used construct to describe the positive changes experienced as a result of the psychological and cognitive efforts made in order to deal with challenging circumstances (Calhoun & Tedeschi, 2001).

Based on the factor analysis of the Posttraumatic Growth Inventory, Tedeschi and Calhoun (1996, 2004) described PTG as having 5 domains: "personal strength", "new possibilities", "relating to others", "appreciation of life", and "spiritual change". These investigators were among the first to focus attention on such positive changes. By so doing, they have encouraged all of us to take a more comprehensive look at the effects of stress, trauma, and loss.

Tedeschi & Calhoun (1996) have given considerable thought to how posttraumatic growth should be measured, and have developed a scale to assess the major domains of posttraumatic

growth (Tedeschi & Calhoun, 1996) Consequently, they have developed a model of posttraumatic growth, and in so doing, have attempted to clarify the conditions under which growth is most likely to occur. They have also discussed how posttraumatic growth relates to ostensibly similar concepts, such as resilience and optimism. Although the evidence regarding many of these links is speculative, the authors' hypotheses are likely to encourage more and better theory-based research.

Although negative aftermaths of traumatic events have been studied extensively, with keen interest on the positive changes following traumatic events, referred to as posttraumatic growth, stress-related growth, or benefit finding, have captured the interest of researchers relatively more recently (Calhoun & Tedeschi, 1999; Helgeson, Reynolds, & Tomich, 2006; Park & Helgeson, 2006). Posttraumatic growth (PTG) is defined as positive psychological change experienced/reported as a result of an individual's struggle to cope with traumatic events (Calhoun & Tedeschi, 1999; Morris, Shakespeare-Finch, Rieck, & Newbery, 2005; Tedeschi, 1999; Tedeschi & Calhoun, 2004). Research showed that PTG is reported following various types of traumatic life events, such as natural disasters (Karanci 2012), accidents (Shakespeare-Finch & Armstrong, 2010) and loss of a loved one (Taku, Calhoun, Cann, & Tedeschi, 2008a).

Tedeschi and Calhoun (2004), in their functional descriptive model, proposed that PTG results from a metaphorically seismic event, shaking the fundamental schemas, beliefs and goals of the individual. This is followed first by automatic ruminations about the event and later with more deliberate ruminations, which leads to schema change and narrative development, and potentially to PTG. Schaefer & Moos (1992), offered a comprehensive model on the determinants of positive changes following traumatic events, which explains positive change with respect to different factor clusters, covering pre-trauma (i.e., individual and environmental) resources, trauma characteristics (i.e., severity of exposure, impact) and

post trauma factors (i.e., coping and appraisals). Schaefer and Moos's (1992) model clearly points out that pre-trauma characteristics, such as personality traits will have an effect on how the trauma impacts the individual.

STATEMENT OF THE PROBLEM

Based on previous research, it was hypothesized that openness (Linley & Joseph, 2004), agreeableness, conscientiousness (Linley & Joseph, 2004) and extraversion (Tedeschi & Calhoun, 1996) will be positively, whereas neuroticism will be negatively (related to PTG total. Although PTG and its domains have been studied extensively with survivors of different kinds of traumatic events, to the knowledge of the researchers, no indigenous study relating to posttraumatic growth occurring after recovering from accidents which happens to be one of the most prevalent traumatic events in Nigeria has been done. The study will further add to the on-going debate as regards the role of personality on PTG. Thus, the present study is to examine growth in the domains of PTG amongst the survivors of a type of traumatic events (i.e., accidents, fractures, dislocations etc.). In a society like Nigeria where the social system is not very pleasant to non-accident victims, it will be of utmost importance to explore the personality traits of the accident survivors in Nigeria, to see how the dimensions of personality play out in their PTG. Nigerians are strong in their faith and this has a way of altering the pattern of action after major life events. Thus, these paucity of document evidence concerning the influence of personality on PTG has created a gap in the body of research which this study aims to investigate.

OBJECTIVES OF THE STUDY

The central objective of this study is to examine the role of PTG on outpatients adult in Igbobi Orthopaedics hospital, Lagos.

This specific objectives are to :

1. investigate the Personality traits and Posttraumatic growth in a sample of adult in the outpatients' clinic of Igbobi orthopedic hospital in Lagos experiencing diverse traumatic events ranging from fracture and dislocation resulting from accidents.
2. investigate if Gender, which has to do with a state of being male or female, has any relationship with individuals' posttraumatic growth.
3. examine the role of religious affiliation on posttraumatic growth.

Methodology

Research design

Based on the nature of this study, it employed both purposive and ex-post-facto sampling techniques. Adult outpatients of Igbobi orthopedics hospital were chosen purposively to serve as the study population because of the traumatic events they had experienced. Ex-post-facto design was employed to select an individual who have been discharged but still attending clinics in the outpatients department of the hospital through reviewed of case files.

Population/sample

The population for this study consisted of an individual who had experienced traumatic events of bone fracture or dislocation in one or more parts of the body as a result of accidents or other traumatic events. A total sample of 59 literate adult outpatients (34 males and 25 females) participated in this study. The mean age of the participant's years was 18.76 and their ages ranged between 18 and 74.

Procedure

Prior to the time of data gathering, the researcher visited the hospital and permission to obtain data for this study was obtained from the medical personnel's in-charge of the outpatients unit. The researcher began the study by introducing himself to the outpatients while in the waiting room for consultation. Each patient was present and were informed of the voluntary, anonymous and confidential nature of participation. They were further told that they were neither advantaged nor disadvantaged for participating or not participating in the study. They were also notified that they could withdraw from the study at any time after which the questionnaire was then given out by the researcher and participants were asked if there is any need for further clarification. Participants who were willing to complete the questionnaires were doing so in their own pace (usually between 20 and 25 minutes) and then returned it back to the researcher (only 17 outpatients decided not to participate), 10 questionnaires had to be discarded as the answers were not properly filled. Ethical approval was duly obtained for the study

Measure.

The research instrument that was used for data collection was a questionnaire which consisted of three sections. The first section was the Personal data questionnaire (PDQ) the second section was Posttraumatic Diagnostic Scale (PDS) and the third section was the Posttraumatic Growth Inventory (PTGI)

Section A: The Personal Data Questionnaire

This section sought background information on respondents' demographic characteristics. This includes questions on participants' (age, sex, religion, ethnic group, state of origin, and highest level of education), and details of the traumatic event (i.e., when it occurred, and the nature).

Section B: The Posttraumatic Growth Inventory (PTGI)

This is a 21-item scale, designed to measure the positive changes experienced after major life stressors (Tedeschi & Calhoun, 1996). Items are rated on 6-point scales (0-I did not experience this change; 5-I experienced this change to a very great degree). The reliability (Cronbach's alpha) coefficients of each factor were reported to be satisfactory.

Section C: In assessing personality traits, the instrument used was be The "Big Five" personality traits dimensions. These dimensions do not represent a particular theoretical perspective but were derived from analyses of the natural-language terms people use to describe themselves. The five-factor model of personality is a hierarchical organization of personality traits in terms of five basic dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience. It's a 44-item inventory that measures an individual on the Big Five Factors (dimensions) of personality (Goldberg, 1993). Each of the factors is then further divided into personality facets. The reliability coefficient was found to be 0.7.

Results

Hypothesis 1: "participants who possess personality traits consisting of Openness to Experience, Agreeableness, Conscientiousness, and Extraversion will have significantly high posttraumatic growth than participants under Neuroticism personality traits".

The statistical tool used to test this hypothesis was Independent samples T-test. The results are presented in the table below.

Table 1: Means and Standard Deviations: Personality Traits and PTG

	Personality trait	N	Mean	S.D	t	p
PTG	Openness to Experience, Agreeableness, Extraversion and Conscientiousness	49	81.51	8.665	6.17	0.000
	Neuroticism	10	63.60	6.535		

The result in Table 1 shows the evaluation of the descriptive statistic the mean scores of the two groups concerned, the participants possessing personality traits composing of Openness to Experience, Agreeableness, Conscientiousness, and Extraversion and participants under

Neuroticism personality traits. It was noted from the table that the Posttraumatic growth of participants with personality traits consisting of Openness to Experience, Agreeableness, Conscientiousness, and Extraversion was higher with a mean score of 81.51 than participants indicating Neuroticism personality trait with a lower mean score of 63.60. The significance of this however is tested and presented in table 1.

Interpretation

The t-test statistics was calculated as 6.170, at 1 per cent level of significance under 57 degrees of freedom, the returned p-value of 0.000 was found less than the level of significance (0.05): $p < 0.05$. Thus, the difference between the posttraumatic growth of participants that possessed personality traits composing of Openness to Experience, Agreeableness, Conscientiousness, and Extraversion compared to participants possessing the Neuroticism personality traits is significant. Thus, the hypothesis was accepted and this means that the participants that possessed personality traits composing of Openness to Experience, Agreeableness, Conscientiousness, and Extraversion have significantly greater posttraumatic growth than participants possessing the Neuroticism personality traits.

Hypothesis 2: "Gender will have an influence on posttraumatic growth such that female participants will have a greater posttraumatic growth than male participants".

The statistical tool used to test this was the Independent samples T-test. The results are presented in the table below.

Table 2: Means and Standard Deviations: Gender and PTG

	SEX	N	Mean	Std. Deviation	t	p
PTG	MALE	34	83.97	12.677	2.44	<0.00
	FEMALE	25	89.76	4.755		

The above table shows the evaluation of the descriptive statistics i.e. the mean scores of the two groups concerned, the male participants and the female participants. It was noted from

the table that the Posttraumatic growth of female participants was higher with a mean score of 83.97 than male participants with a lower mean score of 89.76. The significance of this however is tested and presented in table 2.

Interpretation

The t-test statistics was calculated as -2.440, at 5 per cent level of significance under 44.591 degrees of freedom, the returned p-value of 0.019 was found lesser than the level of significance (0.05): $p < 0.05$. Thus, the difference between the posttraumatic growths of male participants compared to female participants is significant. This implies that the hypotheses was accepted and conclude that female participants do have significantly greater posttraumatic growth than male participants.

Hypothesis 3: "Religion would have significant influence on posttraumatic growth such that Christian participants would have a greater posttraumatic growth than Muslim participants".

The statistical tool used to test this was the Independent samples T-test. The results are presented in the table below.

Table 3: Means and Standard Deviations: Religion and PTG

	RELIGION	N	Mean	S.D	t	p
PTG	CHRISTIANITY	52	76.27	14.70	0.12	0.904
	ISLAM	7	75.57	9.863		

The above table shows the evaluation of the descriptive statistics i.e. the mean scores of the two groups concerned, the Christian participants and the Muslim participants. It was noted from the table that the Posttraumatic growth of Christian participants was higher with a mean score of 76.27 than Muslim participants with a lower mean score of 75.57.

The t-test statistics was calculated as 0.121, at 5 per cent level of significance under 57 degrees of freedom, the returned p-value of 0.904 was found greater than the level of

significance (0.05); $p > 0.05$. Thus, the difference between the posttraumatic growths of Christian participants compared to Muslim participants is not significant. This implies that we will reject the hypothesis and conclude that Christian participants do not have significantly greater posttraumatic growth than Muslim participants.

Discussion

The aim of this study was to ascertain whether a significant relation exists between personality traits and post-traumatic growth in a sample of individuals who have been exposed to a range of traumas. A secondary aim was to investigate whether socio-demographic variables has any relationship with post-traumatic growth. More specifically, the study examined whether personality type contributed to the occurrence of PTG or whether the two constructs are independent from each other. Although theoretical assumptions have been made about the relation between the two concepts, either suggesting that some personality types are necessary precondition for PTG to occur (Costa & McCrae, 1992), the relation has not been extensively studied so far. To the knowledge of the researchers, this study is the first to report a relationship between Personality type and PTG in a Nigerian convenience sample.

Independent sample T-test was run in order to examine the nature of a possible relation between the personality type, gender and religion in the PTG domains of Relating to Others, New Possibilities, Personal Strength, Spiritual Change and Appreciation of Life. The overall model for predicting posttraumatic growth in relation to personality type such as openness to experience, agreeableness, conscientiousness, extraversion, was found to be statistically significant, thus confirming the theoretical assumption made by Costa and McCrae (1992) that personality characteristics such as: openness to experience and extraversion is related to the occurrence of PTG. Also, it confirmed the assumptions of Karanci, Işıklı, Aker, Gül, Erkan, Özkol, & Güzel (2012) that individual personality types such as conscientiousness,

agreeableness, and openness to experience significantly related to the total PTG and most of the domains. There was no significant relationship found to exist between neuroticism and post-traumatic growth. The non-significance of the neuroticism in relation to PTG may be due to the fact that the symptoms characterized with this type of personality characteristic which include: anxiety, sadness, irritability, and nervous tension which might affect the experience of PTG.

Gender was significantly related to the PTG with female participants having a significantly greater post-traumatic growth. It appears the women more than men develop a stronger belief system after having been faced with a trauma. Research has somewhat supported the fact that women, more than men, experience greater PTG (Helgeson et al. 2006). Even though studies have found that people's spiritual belief often weakened after having experienced an extreme stressor, the struggle to come to terms with the adversity appears to result in person's developing a stronger belief system (Andrykowski, as cited in Tedeschi & Calhoun, 1995; Schwartzberg & Janoff-Bulman, 1991). The fact that women seem to experience more positive changes in PTG than men may be linked to gender differences in religion. Various studies have examined such gender differences and found that women tend to be more religious than men (Mahalik & Lagan, 2001; Thompson, 1991). Thompson (1991) hypothesized that gender socialization may be a contributing factor to such differences in that men are commonly socialized to be competent in their workplace, thus relying on themselves, and women are taught to be the caretakers and to be invested in relationships, thereby gaining strength from it. It is therefore possible that men, after having experienced a trauma, may be more invested in regaining their personal strength and competence, whereas women increasingly rely on a spiritual relationship.

Results did not indicate any significant relation between religion and posttraumatic growth. These might be due to similarities in the belief system and acts of worship. Both the

Christianity and Islamic religion have similar perception about distress, traumatic experience in that they both believe that a superior power (God) alone has the ability to relieve them of the distress and result to asking assistance through similar means including prayer, praise and worship and so on. Therefore these similarities might have influence the way both group perceive and experience post-traumatic growth. To the best of the researcher's knowledge, there are no previous studies relating to these variables in the experience of post-traumatic growth.

CONCLUSION

Over the last decade, a growing body of literature has examined growth processes that people report, especially in the aftermath of a traumatic event. Specifically, a vast amount of literature has examined various person variables that possibly alter the occurrence of PTG. However, most of these studies are not indigenous: there is a gap in knowledge regarding the nature and the variables that are related to posttraumatic growth in the Nigerian environment.

REFERENCES

- Alfred, K. D., & Smith, T. W. (1989). The hardy personality: Cognitive and physiological responses to evaluative threat. *Journal of Personality and Social Psychology*, 56, 257-266.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders*(4th ed., text rev.). Washington, DC: American Psychiatric Association.
- AN Karancı, S Işıklı, AT Aker, Eİ Gül, BB Erkan, H Özkol, HY Güzel(2012) Personality, posttraumatic stress and trauma type: factors contributing to posttraumatic growth and its domains in a Turkish community sample *European journal of psychotraumatology* 3 (1), 17303
- Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage to stress and staywell*. San Francisco: Jossey-Bass.
- Costa, P T, & McCrae, R. (1992) *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five Factor Model (NEO-FFI) Professional manual*. Odesa, FL: Psychological Assessment Center

- Growth, Religion, and Cognitive Processing. *Journal of Traumatic Stress*, 13(3), 521-527.
- Calhoun, K. S., & Atkeson, B. M. (1991). *Treatment of rape victims*. New York: Pergamon.
- Janoff-Bulman, R. (2004). Posttraumatic growth: Three explanatory models. *Psychological Inquiry*, 15, 30-34.
- John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (Vol. 2, pp. 102-138). New York: Guilford Press.
- Linley, P. A., & Joseph, S. (2004). *Positive change following trauma and adversity: A review*. *Journal of Traumatic Stress*, 17, 11-21.
- McMillen, J. C. (2004). Posttraumatic growth: What's it all about? *Psychological Inquiry*, 15, 48-52.
- McMillen, J. C., Smith, E. M., & Fisher, R. H. (1997). Perceived benefit and mental health after three types of disaster. *Journal of Consulting and Clinical Psychology*, 65, 733-739.
- Morris, B. A., Shakespeare-Finch, J., Rieck, M., & Newbery, J. (2005). Multidimensional Nature of Posttraumatic Growth in an Australian Population. *Journal of Traumatic Stress*, 18, 575-585.
- Nolen-Hocksema, S., & Morrow, J. (1991). A prospective study of depression and stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. *Journal of Personality and Social Psychology*, 72, 115-121.
- Park, C. L., Cohen, L. H., & Murch (1996). Assessment and prediction of stress-related growth. *Journal of Personality*, 64, 71-105.
- Park, C. L., & Helgeson, V. S., (2006). Introduction to the special section: Growth following highly stressful life events – current status and future directions. *Journal of Consulting and Clinical Psychology*, 74, 791-196.
- Pat-Horenczyk, R., & Brom, D., (2007). The multiple faces of post-traumatic growth. *Applied Psychology: An International Review*, 56, 379-385.
- Personality, Psychological Health, or cognitive Coping. *J ClinPsychol Med Settings*, 15(3), 270-277.
- Rabe, S., Zoellner, T., Maercker, A., & Karl, A. (2006). Neural correlates of posttraumatic growth after severe motor vehicle accident. *Journal of Consulting and Clinical Psychology*, 74, 880-886.
- Ramos, C., & Leal, I. (2013). Posttraumatic Growth in the Aftermath of Trauma: A Literature Review about Related Factors and Application Contexts. *Psychology, Community & Health*, 2(1), 43-54.

- Rausch, S. M., Auerbach, S. M., & Gramling, S. E. (2008). Gender and ethnic differences in stress reduction, reactivity, and recovery. *Sex Roles*, 59, 726-737.
- Schaefer, J. A., & Moos, R. H. (1992). Life crisis and personal growth. In B. N. Carpenter (Ed.), *Personal coping: Theory, research, and application*. Westport, CT: Praeger.
- Steven S. Schwartzberg and Ronnie Janoff-Bulman (1991). Grief and the Search for Meaning: Exploring the Assumptive Worlds of Bereaved College Students. *Journal of Social and Clinical Psychology: Vol. 10, No. 3, pp. 270-288.*
- Taku, K., Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2008). The factor structure of the posttraumatic growth inventory: A comparison of five models using confirmatory factor analysis. *Journal of Traumatic Stress*, 21, 158-164.
- Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences on coping behaviour: A meta-analytic review and an examination of relative coping. *Personality and Social Psychology Bulletin*, 6, 2-30.
- Tedeschi, R.G & Calhoun, L.G. (2004). Posttraumatic Growth: Conceptual Foundations and Empirical Evidence. *Psychological Inquiry*, 15(1), 1-18.
- Tedeschi, R.G & Calhoun, L.G. (1996). The Posttraumatic Growth Inventory: Measuring the Positive Legacy of Trauma. *Journal of Traumatic Stress*, 9(3), 456-471
- Tedeschi, R. G., & Calhoun, L. G. (1996). The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9, 455-471.
- Tedeschi, R. G., & Calhoun, L. G. (1995). *Trauma and transformation: Growing in the aftermath of suffering*. Thousand Oaks, CA: Sage.