



EXAMINING THE ROLE OF RELIGIOUS COMMITMENT AND RESILIENCE AS PREDICTORS OF POSTTRAUMATIC GROWTH IN A NIGERIAN SAMPLE OF TRAUMA SURVIVORS

Endurance Avah Zacchaeus •
Nasarawa State University, Nigeria

Abstract

This study investigated the role of religious commitment and resilience as predictors of posttraumatic growth (PTG) in a Nigerian sample of trauma survivors. The study adopted a cross-sectional survey approach involving a sample of 519 male and female adult participants ($m=47.94$, $SD=9.14$) aged between 35-65 years recruited through convenience sampling. Three standard measures namely; Religious Commitment Inventory (RCI-10), Resilience scale (RS-14) and the Posttraumatic Growth Inventory (PTGI) were used for data collection. Data analysis was conducted using multiple regression analysis and Pearson's r correlation statistical techniques. Results showed that religious commitment significantly predicted PTG ($\beta=.59$, $t(519)=16.73$, $p<.001$) as well as Resilience ($\beta=.34$, $t(519)=7.27$, $p<.001$). Furthermore, religious commitment was shown to correlate positively with resilience ($r=.66$, $p<.001$). Clinical implications of these findings were discussed.

Keywords: trauma survivors; religious commitment; resilience; posttraumatic growth; Nigeria

Introduction

One of the commonest inevitabilities of human existence is the experience of traumatic life events. About 90% of the general population have been shown to experience at least one potentially traumatic event in their life

Correspondence concerning this paper should be addressed to:

• Nasarawa State University, Department of Psychology, Keffi, Nigeria. zip code 961101.
Tel.: +234 803 508 2821. E-mail: avah.endyz@gmail.com

time (Galea et al., 2007; Smiola et al., 2015; Duckers et al., 2016) including sudden death of loved ones, road traffic accidents, accidental injuries and terminal illness (Norriss, 1992; Ogle et al., 2014). Traumatic events include threatened death, serious injury or sexual violence, which might occur directly or indirectly by witnessing the event, learning of the such events occurring to other people, or one's repeated confrontation with aversive details of such events (American Psychiatric Association, 2013).

There is a plethora of studies showing that psychological stress arising from traumatic and adverse experiences can lead to psychopathology (*e.g.*, Galea et al., 2007; Keyes et al., 2013; Scott et al., 2013; Liu et al., 2020). However, ironically, there are also substantial evidence of the possibility of deriving psychological benefits from adversity (Tedeschi & Calhoun, 2004; Lim, 2019; Boals & Schuler, 2019). These benefits popularly known as Posttraumatic Growth (PTG) are experienced in different forms including increased awareness of the self, others, and the world, greater sense of personal strength, improved relationships with others as well as deeper appreciation of life. Posttraumatic growth (PTG) basically represents continuous strategic coping which manifests itself as enhancement in psychological functioning following a "struggle" with traumatic event (Tedeschi & Calhoun, 1996; 2004; Maitlis, 2020). It originates from the spirited efforts made by trauma-affected individuals to rebuild their world after being exposed to major emotional upheaval. In other words, for an individual to experience PTG or trauma-associated psychological benefits including increased spiritual/religious commitment, enhanced sense of personal strength and improved relationship, he/she must have, inevitably, been exposed to a highly stressful event (Tedeschi & Calhoun, 2004; Janoff-Bulman, 1992; Klein & Ehlers, 2009; Jirek & Saunders, 2018).

The PTG phenomenon seems intriguing but it resonates with the common inspirational philosophy which holds that people can grow from, rather than be weakened or broken by adverse occurrences in life (McMillen, 1999; Bonanno, 2005; Calhoun & Tedeschi, 2006). However, for the purpose of clarity, it should be noted that the PTG concept does not recognise extreme trauma itself (being an unpleasant experience) as good and desirable but rather a precondition for the development of enhanced psychological functioning or growth (Tedeschi & Calhoun, 2004). Therefore, within the context of the PTG

development mechanism, extreme trauma should not be misconstrued as positive in itself but, rather, a means to an end.

The present study which aimed to explore the role of religious commitment and resilience in potentially predicting PTG occurrence represents an attempt to address the problems of limited research on PTG and dearth of empirical information on the role of psycho-social factors in the PTG development process. Majority of literature on PTG comes from developed western societies, while relatively little is known about the phenomenon in less developed countries of the world. Additionally, this study explored further clarification regarding potential involvement of psycho-social factors in PTG occurrence as recommended by a number of previous studies (*e.g.*, Ramos & Leale, 2013; Barrington & Shakespear-Finch, 2013), given the complex nature of the concept.

This study viewed religious commitment as encompassing both religious and spiritual practices, behaviours and experiences manifested across the full range of institutional and personal domains. African societies perceive religion as the basis of human existence with the idea of Supreme Being (creator or theism) seemingly "engraved" on the people's mind as they confront everyday life challenges. Studies have shown that major religions across the world including Christianity, Islam and Judaism attribute adverse life events to some unseen super-natural forces and view suffering traditionally as a necessary pre-condition for positivity (Tedeschi & Calhoun, 2004; Pargament et al., 2006; Manglos & Weinreb, 2013; Park, 2007; Prati & Pietrantonio, 2009; McIntosh et al., 2011; Acquaye, Sivo, & Jones, 2018). It has been suggested that the emergence of PTG post-trauma can be enhanced by increased commitment to, and engagement in religious activities/behaviours. For example, a study of Muslim parents who had lost their children to road traffic accidents reported a direct link between positive religious coping (*e.g.*, active religious engagement) and PTG (Abu-Raiya & Sulleiman, 2020). Another study conducted with a sample of bereaved people also discovered relationships between psycho-social factors and psychological growth with religious commitment playing a significant predictive role (Ryan, 2021). Given the salience of religion in the life of traditional African societies, it is expected that there will be significant occurrence of PTG among Nigerians who have experienced highly traumatic existential challenges.

The second potential predictor factor in PTG occurrence examined in this study is resilience. Resilience refers to a dynamic process of efficient adaptation in adverse situations, characterised by at least three distinct but interrelated psychological dimensions of trauma response outcomes, namely; recovery, resistance and reconfiguration (Bonanno, 2004; Lepore & Revenson, 2006). However, in consonance with the views of Polk (1997), Luthar et al. (2000) and Bonanno et al. (2001), this study conceptualised resilience as a dynamic process which produces adaptive outcomes including perceived transformation, growth, and positive emotions following extreme trauma, rather than merely having the inherent potential to resist negative psychological consequences of trauma. Literature suggests that resilience may be positively associated with psychological growth after trauma exposure (Ogin'ska-Bulik, 2015; Bensimon, 2012). Specifically, two dimensions of PTG -personal strength and new possibility- have been found to strongly correlate positively with resilience (Nishi et al., 2010; Büyükaşık-Colaketal, 2012). Jirek and Sounders (2018) asserted that stressful life experiences to which individuals are inevitably exposed tend to trigger positive impacts on their coping ability, potentially leading to resilience, and PTG, ultimately. A recent study of bereaved individuals in America found that resilience predicted PTG (Ryan, 2021). The evidence linking resilience with positive trauma outcomes including PTG appear to suggest the possibility of resilience, conceptualised as a potential salutogenic (healthy) response to trauma, serving as a catalyst for PTG development following trauma exposure.

The overarching aim of this research was to examine religious commitment and resilience as potential predictors of PTG in a Sub-Saharan Africa (Nigerian) sample of trauma survivors with the expectation that findings made could deepen understanding regarding PTG as a desirable psychological trauma outcome, while adding substantial value for research and practice.

The following three hypotheses were made:

- i.* Religious commitment will significantly predict posttraumatic growth occurrence among trauma survivors.
- ii.* Resilience will significantly predict posttraumatic growth occurrence among trauma survivors.
- iii.* There will be significant positive correlation between religious commitment, resilience, and PTG among trauma survivors.

The study context

This study was carried out with a civilian population comprising residents of Odi community in Bayelsa State, Nigeria who had been directly affected by military invasion. The community which hosts three oil wells controlled by Shell Petroleum Development Company (SPDC) is located along the bank of River Nun in Nigeria's Niger Delta region. Ironically, however, despite the rich oil deposits, the inhabitants are poor peasant farmers who survive mainly through fishing, farming, palm-oil production and petty trading.

This population was chosen for the study in view of its unique trauma history. In 1999, there was an attack by the Nigerian military on the community, infamously referred to as "Odi Massacre", which resulted in significant devastation and highly traumatic experiences including loss of loved ones, severe injuries, sights of killings and mutilated dead bodies, and massive destruction of property (Human Rights Watch, 1999; Oroh, 1999; Ninmo, 2006). The military exercise was carried out in search of bandits who were believed to reside in the community.

Although participation in this study was voluntary, the following inclusion criteria were used in the recruitment process: (a) the individual must have been resident in Odi community during the military invasion of 1999, (b) he or she must be within the age range of 35 to 65 years (*i.e.*, at least 15 years of age during the military invasion in 1999), (c) directly encountered the Odi military invasion, and was exposed to at least one major traumatic experience due to the attack, and (d) had a minimum of primary education and can read/write. However, it is important to note that the specific type of trauma and degree of traumatic symptoms experienced by individuals were not considered as such factors have been shown not to have significant effect on PTG (Shakespear-Finch & Barington, 2012).

In terms of age, the study focused on the minimum age of 35 purposefully to the exclusion of children. This is because any member of Odi community presently below 35 years would probably have been too young at the time of the military invasion and probably could not experience the full impact of the trauma (Powell et al., 2003). It has been shown that children and young adolescents who by virtue of their age might not have developed sufficient cognitive ability (or schema) may not be able to effectively engage in the PTG process (Tedeschi & Calhoun, 2004). Furthermore, research suggests

that elderly persons tend to experience less PTG because they are less amenable to accepting new ways of conceptualising trauma (Tedeschi & Calhoun, 2004). Thus, only adults not older than 65 years who experienced the tragic event were considered suitable and accepted for participation.

Finally, the study limited participation to only persons who had attained at least primary level of education; to the exclusion of those without formal education as PTG has been shown to be negatively correlated with educational background (Ullman, 2014).

Objectives

- i. To determine the predictive role of religious commitment and resilience in the development of posttraumatic growth among trauma survivors.
- ii. To explore the association between religious commitment, resilience, and posttraumatic growth among trauma survivors.

Method

Participants

This study adopted a cross-sectional survey design. Five hundred and nineteen (519) participants comprising 263 adult males (50.7%) and 256 females (49.3%) aged between 35-65 years ($m=47.94$; $SD=9.14$) were recruited using convenience sampling technique. They were all residents of Odi community who unconditionally volunteered to participate in the study.

Instruments

Participants were required to provide socio-demographic information including age, sex, marital status, educational qualification, religious affiliation and ethnicity. In addition, three standard instruments namely, the 10-item Religious Commitment Inventory (RCI-10), Resilience Scale (RS-14), and PTG Inventory (PTGI) were used for data gathering.

The Religious Commitment Inventory (RCI-10; Worthington et al., 2003). This instrument measures individuals level of religious adherence in daily life and the extent to which life events are interpreted based on religious views. The 10 items of this inventory meant for both research and clinical use are arranged on a 5-point Likert scale: "not at all true of me"=1, "somewhat true of me"=2, "moderately true of me"=3, "mostly true of me"=4, and "totally true of

me"=5. It is made up of two subscales, namely; intrapersonal religious commitment (6 items), and interpersonal religious commitment (4 items). Examples of items included in the scale are: "my religious beliefs lie behind my whole approach to life", and "I enjoy working in the activities of my religious organisation", reflecting intrapersonal and interpersonal subscales, respectively. Higher scores on the inventory indicate higher religious commitment. Worthington and colleagues (Worthington et al., 2003) reported estimated internal consistency of Cronbach's alpha ranging from .93 - .96. Also, Cronbach's α of the subscales were .92 and .87 for intrapersonal religious commitment and interpersonal religious commitment, respectively. The full scale has a test-retest reliability of .87 (3-week and 5-month). In a Nigerian study, Ifeagwazi and Chukwuorji (2014) obtained Cronbach's α of .83 (full scale), .78 (intrapersonal religious commitment) and .71 (interpersonal religious commitment). The language of the RCI-10 is generic; not skewed toward any specific religious identity, thus it was considered highly suitable for use in the Nigerian context where multiple religious beliefs exist.

The 14-item version of Resilience scale (RS-14) (Wagnild & Young, 1993). The 14-item version of Resilience scale (RS-14) was used to measure the capacity to withstand life stressors, thrive and make meaning from life's challenges. This is a 14-item standardized psychological inventory developed by Wagnild and Young (1993) for measuring individuals' capacity to withstand traumatic experiences and thrive or function optimally in the face of life stressors. It contains 14 items which are scaled in a positive direction on a 7-point response ranging from strongly disagree (1) to strongly agree (7). Examples of items in RS-14 include: "I usually take things in stride" "My life has meaning", etc. The developers reported Cronbach's alpha reliability coefficients of .91 to .93 from a wide range of studies. Significant concurrent validity was also shown with moral (.31), depression (-.41), life satisfaction (.37), self reported health status (-.30) and the 25-item resilience scale (.97) (Wagnild & Young, 1993). In a study aimed at validating RS-14 in Nigeria, Abiola and Udofia (2011) reported a Cronbach's α coefficient of .81, a convergent validity of .97 with RS-25 as well as discriminant validity coefficients of -.28 (Depression subscale of Hospital Anxiety Depression Scale, HADS) and -.26 (Anxiety subscale of HADS). Ifeagwazi et al. (2015) obtained a Cronbach's alpha of .83 and a Spearman-Brown split-half reliability coefficient of .80 in a Nigerian population. Higher scores on the RS-14 indicate more resilient characteristics.

The Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996). PTG measures the extent to which survivors of traumatic experience perceive personal growth. The inventory consists of a 21-item scale which measures the above mentioned broad categories of perceived benefit (Tedeschi & Calhoun, 1996). Specifically, the measurement instrument includes five subscales, namely Appreciation of life (AL) (3 items, *e.g.*, "I can better appreciate each day"), New Possibilities (NP) (5 items, *e.g.*, "I established a new path for my life"), Personal Strength (PS) (4 items, *e.g.*, "I know better that I can handle difficulties"), Spiritual Growth (SG) (2 items, *e.g.*, "I have a better understanding of spiritual matters") and Relationship with Others (RO) (7 items, *e.g.*, "I put more effort into my relationships") (Tedeschi & Calhoun, 1996). The PTGI yields both scores on each of the five subscales as well as a total score. Participants are asked to rate items of each scale from 0 ("I did not experience this change as a result of my crisis") to 5 ("I experienced this to a very great degree as a result of my crisis"). The instrument has good internal consistency reliability coefficient (Cronbach's alpha); previous studies have reported .90 for the 21 items (Tedeschi & Calhoun, 1996) as well as .94 (Ciali, 2006). The Cronbach's α of the subscales were reported to range from .67 to .85 (Tedeschi & Calhoun, 1996; Ciali, 2006). Test-retest reliability of 2-months interval was reported as .71 (Tedeschi & Calhoun, 1996) and .53 (Linley & Joseph, 2006). Adequate reliability and validity of the PTGI has been reported in a previous study in Nigeria (Ifeagwazi & Chukwuorji, 2014), and successfully used with the Cronbach's α of .92 (overall PTG), .81 (AL), .76 (NP), .70 (PS), .89 (SG) and .68 (RO) similar to the estimates in the original version (Tedeschi & Calhoun, 1996). The 21 items of the inventory are all positively worded and scored accordingly. Scores range from 0 to 105, with higher scores reflecting greater levels of perception of growth. The content validity of PTGI has been supported by qualitative research (Shakespeare-Finch et al., 2013).

Procedure

Institutional approval for this study was obtained from the Ethics committee of the Department of Psychology, Nasarawa State University, Keffi, Nigeria. Thereafter, the author secured the permission of the traditional ruler (*i.e.*, the "Amananaowei") of Odi kingdom to proceed with the study.

Three post-graduate students of the Niger Delta University, Wilberforce Island, Amassoma, Bayelsa State were recruited to serve as Research Assistants. The research team comprising the author and research assistants, then, met potential participants in their various homes from door-to-door in the community and recruited participants. Upon arrival at each of the households, any adult seen was asked whether he or she was willing to answer a set of questionnaires relating to their experiences during the November 1999 military invasion. Those who accepted to participate and met the inclusion criteria were given explanation about the nature of the study.

Some of them raised the suspicion that the study may have negative consequences on the community or be used by the author for commercial purposes but these fears were allayed. Additionally, they were informed that participation in the study would not attract any form of reward, and that anyone who felt uncomfortable at any time in the course of the study was free to withdraw. In order to further allay their fears, participants were informed of the voluntary, anonymous and confidential nature of the study. Those who were satisfied with the explanations went ahead to complete the questionnaires at their homes in the presence of the author and research assistants who were on hand to provide help whenever it was needed. Participants were given a maximum of 25 minutes each to complete questionnaires but majority of them completed within 20 minutes or less. On the whole, the data collection exercise lasted for 2 weeks.

Considering that some participants may experience emotional distress due to disturbing memories of the tragic event while completing the questionnaires, the author's phone contact was made available to take care of possible psychological emergencies.

Data analysis and results

Prior to the data analyses using SPSS, version 23 (IBM Corporation, 2015), the raw data was carefully checked for missing data and outliers. Table 1 and 2 contains participants' characteristics presented as frequencies and percentages. The age of participants shown indicated a range of 35-65 years ($m=47.94$; $SD=9.143$). In terms of marital status, 55.5% were married, 19.7% single, 16.4% widowed, whereas 8.5% were either divorced or separated.

Regarding religious affiliation, 87.7% were Christians, 2.3% Muslims, 6.7% belonged to African Traditional Religion (ATR), while 3.3% were members of other unspecified religions. The distribution of participants based on educational background included Primary education (19.8%), secondary education (47.0%), and Higher education comprising tertiary institutions (33.1%).

Table 1. Frequency and percentages of participants' demographic characteristics

Demographic variables		Frequency	Percentages
Gender	Female	256	49.3
	Male	263	50.7
	<i>Total</i>	<i>519</i>	<i>100%</i>
Marital Status	Single	102	19.7
	Married	288	55.5
	Divorced/Separation	44	8.5
	Widow	85	16.4
	<i>Total</i>	<i>519</i>	<i>100%</i>
Demographic variables		Frequency	Percentages
Religion	Christian	97	69.3
	Islam	41	29.3
	ATR	35	6.7
	Others	17	3.3
	<i>Total</i>	<i>519</i>	<i>100%</i>
Ethnicity	Ijaw	462	89
	Urhobo	9	1.7
	Isoko	22	4.2
	Igbo	5	1
	Yoruba	7	1.3
	Hausa	3	0.6
	Itsekiri	7	1.3
	Esan	2	0.4
	Ikwere	1	0.2
	Efik	1	0.2
<i>Total</i>	<i>519</i>	<i>100%</i>	
Education	Primary	103	19.8
	Secondary	22	47
	Tertiary	172	33.1
	<i>Total</i>	<i>519</i>	<i>100%</i>

Table 2. Descriptive Statistics means and standard deviations

	N	Minimum	Maximum	M	SD
AGE	519	24.00	75.00	47.9422	9.14325
Religious Commitment	519	10.00	50.00	40.0058	7.41034
Resilience	519	22.00	98.00	81.1272	13.08169
Posttraumatic Growth	519	.00	104.00	75.7553	20.20120
N	519				

Furthermore, a hierarchical Multiple Regression Analysis was carried out to examine the extent to which religious commitment and resilience predicted posttraumatic growth. Summary of results are presented in Table 3 which showed that religious commitment was a positively significant predictor of PTG, $\beta=.59$, $t(519)=16.73$, $p<.001$ in line with hypothesis one. The unstandardised regression coefficient (B) showed that for every one unit rise in religious commitment, PTG increased by 1.62 units. The contribution of religious commitment in explaining the variance in PTG was 35% ($R^2=.35$), and the overall model was found to be significant, $F(1, 515)=279.82$. The summary table also indicated that resilience was a significant positive predictor of PTG, $\beta=.34$, $t(519)=7.27$, $p<.001$. Specifically, the unstandardized coefficient (B) showed that for every one unit rise in resilience, PTG increased by .53 units. The model equally showed that the contribution of resilience in explaining the variance in PTG was 6% ($\Delta R^2=.06$), and the overall model was significant, $F(2, 514)=180.45$, $R^2=.41$.

Table 3. Summary of Multiple Regression analysis predicting PTG

Predictors	Step 1			Step 2			Step 3		
	B	B	T	B	B	t	B	β	T
Religious commitment	1.62	.59	16.73***	.99	.36	7.88***	.64	.23	6.53***
Resilience				.53	.34	7.27***	.26	.16	4.49***
R^2	.35			.41			.66		
ΔR^2	.35			.06			.24		
F	279.82(1, 515)***			1180.45 (2, 514)***			327.07(3, 513)***		
ΔF	279.82(1, 515)***			52.89(1, 514)***			364.83(1, 513)***		

Note: *** $p < .001$; ΔR^2 = Change in R^2 ; ΔF = Change in F

To address the third hypothesis which proposed significant positive correlation among religious commitment, resilience and PTG, the Pearson's correlation (r) was conducted. Table 4 presents summary of the results which showed that religious commitment was positively related to resilience ($r=.66$,

$p < .001$), and PTG ($r = .59, p < .001$), while resilience also correlated positively with PTG ($r = .57, p < .001$). In other words, being more committed to religion was associated with more resilience and psychological growth from the traumatic event.

Table 4. Summary of correlation of religious commitment, resilience, and PTG

Variables		1	2	3
1	Religious Commitment	-		
2	Resilience	.66***	-	
3	PTG	.59***	.57***	.74***

Note: *** $p < .001$; ** $p < .01$; * $p < .05$

Discussion

The main aim of the present study was to examine the role of religious commitment and resilience as predictors in the occurrence of PTG among trauma survivors. This study findings add to the growing knowledge that trauma exposure can result to positive psychological outcomes conceptualised as posttraumatic growth, and psycho-social factors may facilitate this process among trauma survivors.

Three hypotheses were examined in this study. First, it was found that religious commitment contributed 35% ($R^2 = .35$) to the variance in PTG, and the overall model was significant, $F(1, 515) = 279.82$. This means that religious commitment plays a significant role in predicting PTG occurrence among trauma survivors. Secondly, the results showed that resilience explained 6% ($\Delta R^2 = .06$) of the variance in PTG score with an overall model of, $F(2, 514) = 180.45, R^2 = .41$, implying that resilience also significantly predicted PTG occurrence. Thus, hypotheses one and two of this study were supported.

The findings concerning the first hypothesis are consistent with majority of previous comparable studies which reported the predictive role of religious commitment in PTG occurrence. For example, Parapully et al. (2002) found that religiosity/spirituality facilitated PTG through important components of religious commitment including faith in God, belief in an after-life, praying, and attending church services. In same vein, prayers, religious attendance and participation in other religious functions have been shown to have positive impact on the mental health of individuals confronted with adverse conditions (Harris et al., 2005). A study of female survivors of Hurricane Katrina reported that positive religious coping which essentially represents religious

commitment predicted PTG (Chan & Rhodes, 2013). Theoretically, highly traumatic events are known to trigger cognitive processing including involuntary repetitive thinking (or rumination) which facilitates self-disclosure and self-discovery resulting to the emergence of positive psychological changes or posttraumatic growth (Schaefer & Moos, 1992; Tedeschi & Calhoun, 2004; Tedeschi & Calhoun, 2008). Given this theoretical position, the relationship between religious commitment and posttraumatic as reported in the present study can be understood as religious commitment behaviours and practices provide suitable conditions for cognitive processing including meaning-making and rumination (*e.g.*, Pargament, 1997; Calhoun & Tedeschi, 1995; Calhoun et al., 2000; Tedeschi & Calhoun, 2008), consistently found to enhance PTG occurrence in trauma survivors (Calhoun et al., 2000; Tedeschi et al., 2000; Ulrich & Lutgendorf, 2002).

Furthermore, religion has been shown to be the most plausible basis for meaning-making and appropriate cognitive framework that might engender personal growth (Emmons et al., 1998; Park, 2006). Trauma survivors tend to cognitively frame their adverse situations positively and thrive through religious dogma, tradition and regulations with a view to finding the divine meaning or purpose of the event (Emmons et al., 1998). By engaging in religious commitment behaviour (*e.g.*, praying, fasting, reading of scriptures, etc.), the trauma survivor is able to alter his/her cognitive frame by automatically switching from intrusive and anxiety-ridden thinking (or brooding) to a more productive (reflective) form of rumination which promotes positive posttraumatic adaptation and growth (Pargament, 1997; Nolen-Hoeksema & Davis, 2004; Calhoun & Tedeschi, 2006). Additionally, it has been shown that people who regularly take part in religious activities tend to have a larger social support network from which support can be drawn to mitigate the negative impacts of adversity whenever they are confronted with one (Ringdal & Ringdal, 2010).

Regarding the second hypothesis, the current finding that resilience significantly predicted PTG occurrence among trauma survivors is in tandem with previous studies. Ogińska-Bulik (2014) explored the role which resilience plays in PTG occurrence among people who have experienced the death of someone close and loved including parent, spouse, child, sibling or a very dear friend and found that resilience accounted for 22% of the variances, thus significantly contributing to PTG occurrence. In a study, Thabet, Elheloub, and

Vostanis (2015) examined the association between war-related traumatic experiences, PTG and resilience among individuals who reported various traumatic events including mutilated bodies on television, sound of artillery bombardment and loud sound of drone's motors and inhalation of bad smells due to bombardment in Gazar Strip, and found resilience to be positively correlated with PTG ($r=.39$, $p<.001$). Wu, Zhang, Liu, Zhou, and Wei (2015) explored the relationship between resilience, rumination, PTSD and PTG among Chinese earthquake survivors and found that resilience and rumination had positive influence on PTG occurrence ($\beta=0.32$, $p<.001$; $\beta=0.17$, $p=.049$). Findings from Nishi et al. (2010) and Bensimon (2012) also suggested that resilience may be an important determinant of PTG, and since resilience and PTG are both factors that support well-being (Lepore & Revenson, 2006), it seems understandable that they may be associated.

However, notably, the above finding regarding hypothesis two which revealed resilience as a predictor of PTG contradicted the findings of Zerach et al. (2013). This may be attributed to three methodological differences between Zerach et al (2013) and the present study. Firstly, Zerach et al. (2013) conceptualised resilience as the mere absence of posttraumatic stress symptoms, whereas the current study defined resilience as a dynamic process of a person's adaptation after adversity. Second, while Zerach et al. (2013) assessed resilience with Connor-Davidson resilience scale (2003), the present study measured resilience using the Wagnild and Young's (2009) Resilience Scale. Third, Zerach et al used only male participants despite the fact that research has suggested the likelihood of women experiencing higher levels of PTG than men (Linley & Joseph, 2004), while the present study involved both male and female to control for possible gender-based biases.

Finally, the third hypothesis of this study was also supported by the findings as religious commitment, resilience, and PTG were found to be significantly positively correlated. This is consistent with findings of a number of previous studies. For example, Ifeagwazi and Chukwuorji (2015), in a non-western (Nigerian) cross-sectional correlational study revealed a positive association between religious commitment and domains of PIG. Similarly, positive correlation between resilience and growth has been reported by other studies (*e.g.*, Ogin'ska-Bulik, 2015; Bensimon, 2012; Sexton et al., 2010; Nishi et al., 2010; Büyükaşık-Colaket al., 2012; Jirek & Sounders, 2018), which suggests that highly traumatic and stressful life experiences can trigger positive

impacts on coping ability, which in turn, may lead to resilience, and ultimately PTG in survivors. The current finding can, therefore, be explained using Calhoun and Tedeschi's (2006) theoretical model which posits that traumatic events of "seismic" proportion sets in motion series of cognitive engagement including rumination which leads to PTG emergence and enhanced adaptation. Individuals who had confronted and struggled with extremely adverse situations in their life time appear to develop enhanced psychological functioning which manifest as strategic coping behaviour and resilience (Tedeschi & Calhoun, 2004; Oginska-Bulik, 2015; Maitlis, 2020).

Conclusion

The current findings derived from a non-western sample of trauma survivors represents an important data for cross-cultural consideration in posttraumatic growth. It may, additionally, engender new ways of viewing traumatic experience whereby individuals (especially in less developed countries) might begin to perceive trauma more as a precursor for positivity and an opportunity for transformative life changes rather than a reason for despair. Finally, this study may deepen the general understanding of people, particularly in less developed societies, about the possibility of positive psychological changes and strength in suffering or adverse conditions wherein weakness and pathology are ordinarily expected.

In terms of practical implications, findings of this study underscores the importance of strength-based approaches which are empowering, rather than focusing mainly on psychological vulnerabilities and negative outcomes following trauma exposure. Therefore, the findings and insights provided should serve as impetus for a paradigm shift in the focus of psycho-social intervention for trauma survivors - moving away from the traditional "psychopathology" to growth facilitation.

Limitations

The cross-sectional methodology approach adopted in this study does not rigorously demonstrate the dynamic process leading to the emergence of PTG. Additionally, this approach eliminates the ability to make causal attributions between religious commitment, resilience, and PTG. generalisation of the present study findings to other populations may be problematic

considering that the present sample was purely Africans and predominantly Christians.

Suggestions for future studies

It is known that post-traumatic growth happens over time (Tedeschi & Calhoun, 1996, 2004), thus further studies investigating PTG experiences of trauma survivors would need to adopt a longitudinal approach to reveal its temporal dimensions. More so, this may provide a sound basis for causal assumption concerning the relationship between religious commitment, resilience, and PTG. Finally, further replication studies with samples drawn from similar populations in other jurisdictions are recommended for the purpose of wider generalisation.

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