

Elaboration on posttraumatic growth in youth exposed to terror: the role of religiosity and political ideology

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Abstract

Objectives This study aims to examine competing explanations of the relationship between religious and political ideology commitment with posttraumatic growth.

Method Subjects were Israeli youth who were exposed to terror ($n = 2,999$) aged 13–15. Measures included: post-traumatic growth inventory, religious orientation, ideological commitment, objective and subjective exposure to terror.

Results Both religiosity and political ideology mediated the effects of exposure and fear on growth. Political ideology but not religiosity, had a moderating effect, such that subjective fear was positively associated with growth only among those with stronger ideologies.

Conclusion Results support the contention of Terror Management Theory that cultural beliefs have beneficial effects on well being in the face of adversity and emphasize the role of cultural world as effecting growth, beyond trauma.

Keywords Posttraumatic growth · Adolescence · Political ideology · Religiosity · Terror

Introduction

Following exposure to war and terror children and adolescents are documented as suffering a range of adverse psychological effects, including posttraumatic stress disorder (PTSD), depression, anxiety, and behavioral problems (e.g., [9, 20, 56]). Despite the negative consequences of war, positive outcomes have also been observed in youth following terror and war. These include elevated pro-social behavior [31, 48], self-esteem [3], and well-being [2].

Positive or salutogenic outcomes of traumatic events have received considerably less attention than negative or pathogenic ones. Tedeschi and Calhoun [55], however, have demonstrated that traumatic events may lead to what they call “posttraumatic growth” (PTG). Growth refers to the survivor’s perception of “personal benefits, including changes in perception of self, relationships with others, and philosophy of life, accruing from their attempts to cope with trauma and its aftermath” ([55], p. 458). Recent research has shown that PTG occurs in adults exposed to various traumatic events, including war [42]. Relatively little, however, is known about PTG among children and adolescents [30] and particularly the factors that promote PTG among youth.

Several studies have suggested that religiosity is a key predictor of psychological growth among adults [6, 40, 55]. The role of religiosity in growth among youth, however, is currently unclear. Research has shown that among youth the positive significant association between growth and religiosity, became insignificant after adjusting for age [36]. Among adolescents indirectly exposed to the 11th September terrorist attacks, however, religiosity has been shown to be positively associated with growth [37]. Accordingly, the relationship between religiosity and growth among youth is not fully understood.

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Religiosity is considered to have some unique features that may contribute to growth. These includes: religion's ability to serve as a social coping resource; enhance mastery feelings through prayer and rituals; and attribute meaning to the traumatic event (e.g., [10, 19, 39, 50]). Regardless of the explanation of the positive association between religiosity and growth, these studies consistently show that religion has salutary, unique and irreplaceable properties.

Another explanation for the positive relationship between religiosity and growth is offered by terror management theory. This theory promotes the idea that constructed cultural world views may have positive effects in times of adversity. It posits that cultural structures give order, meaning, value, and convey literal or symbolic immortality to our lives, and so may enhance coping [18]. According to the theory, this positive protective ability will be found for any cultural world view. Religion, as well as political ideology, are both form of world views which provide values, a way of life, and ethically appropriate behavior [1, 12, 16, 24, 35, 39]. Seen this way, it is hypothesized that like religiosity, other world views such as political ideology will induce benevolence during times of terror.

Few studies have examined the relationship between political ideological commitment and well-being, in youth in times of war or terror. Studies of adults and teenagers, however, suggest that ideology has a positive effect on adjustment in the face of adversity. For instance, Nazi concentration camp survivors who coped the best held intense ideological commitments (notably the ultrareligious and communists [5]). Similarly, a review has noted that non-ideologically committed youth suffer more from man-made stressors than their ideologically committed peers. This has been noted among militant Black Muslims in Chicago, militant Hamas supporters in the West Bank and extreme Zionists in Israel [15].

Overall, most studies suggest that ideologically committed youth suffer less during armed conflict compare to their counterparts (e.g., [27, 43, 45]). Some studies, however, have shown only a marginal difference between ideologically committed and non-committed youth (e.g., [44, 49]), while others found it to be associated with distress when the threat was perceived as a possible (e.g., [47, 52]). It seems, therefore, that the role of ideology in helping youth deal with the horrors of war and terror is currently unclear. Moreover, research has examined the role of ideology in buffering distress, whereas to the best of our knowledge, no study to date has assessed the role of political ideology on PTG among youth.

The current study aims to investigate competing hypothetical relationships to clarify the role of ideology on growth following trauma among youth. Specifically the relationships between political ideological beliefs and religious commitment with PTG are examined. The hypotheses tested are

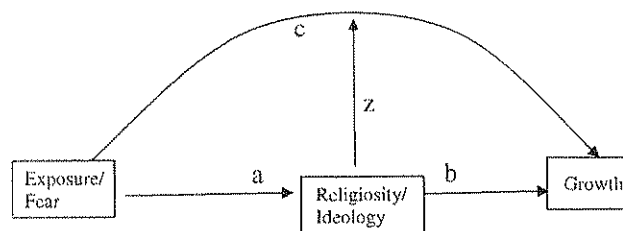


Fig. 1 Moderating and mediating relationships. *c* mediation, *z* moderation, *a* and *b* are direct effects. All paths in the model except *z* are supported

illustrated in Fig. 1. We test whether the relationship between exposure to terror and fear with growth is characterized by mediation (paths *a* and *b* in Fig. 1), moderation (path *c* and *z* in Fig. 1) or direct effects (path *c* and *b* in Fig. 1). This will enable us to delineate the type of association that religiosity and political ideology have on the relationships between exposure and fear on growth. Based on terror management a mediating effect on the growth after adversity is posited for both religiosity and political ideology.

Method

Subjects and procedure

Cluster sampling was used, to study 2,999 adolescents in grades 7–10 from 11 schools in Israel. The schools were in four areas characterized by different levels of exposure to terror: (1) areas within Israel's internationally accepted borders that were not exposed to terror; (2) areas within the internationally accepted borders that were exposed to terror; (3) areas of Judea and Samaria exposed to low levels of terror; and (4) areas of Judea and Samaria and the Gaza Strip exposed to high levels of terror. In each area, we randomly chose one secular and one religious high school (except for area 4, that has no secular schools).

After receiving the necessary authorizations and permits from the Ministry of Education, and the permission from the students' parents, we asked all the 7–10th grade students' present on the day of testing to complete a questionnaire. On average, the students completed the questionnaires within 45 min, in the presence of a research assistant. The response rate was 92.1%. The participants were 42.2% boys and 57.8% girls. 35.5% were 13 years old, 36.5% 14 years old, 26.9% 15 years old, and 1% 16 years old.

Instruments

Objective exposure to terror

Objective exposure to terror was assessed with the Exposure to War and Terror Questionnaire [51]. The modified

version used for the present study contained 17 items with different kinds of trauma-related incidents. Examples included: “Stones were thrown at a car in which an acquaintance was traveling,” “A relative was shot at,” and “I was injured in a terror attack.” The objective level of exposure was scored as the total number of terror incidents to which the respondent was exposed; scores ranged from 0 to 17, with higher scores indicative of greater exposure.

Subjective exposure

For each terror incident respondents reported having experienced, they were asked to indicate the level of fear felt at the time of the incident on a four-point scale, ranging from 1 (not scared) to 4 (very scared). Subjective level of exposure was scored as the mean of the subject’s responses on this scale.

Posttraumatic growth inventory (PTGI; [55])

The PTGI was used to assess posttraumatic growth. It was translated into Hebrew using back translation. The PTGI contains 21 items, based on five theoretical aspects of growth [55] that include: new possibilities ($\alpha = 0.82$), relating to others ($\alpha = 0.85$), personal strength ($\alpha = 0.77$), spiritual change ($\alpha = 0.63$), and appreciation of life ($\alpha = 0.74$). For each item, respondents indicate the level of change they had experienced due to exposure to terror, on a four-point Likert scale (ranging from 1 “no change” to 4 “significant change”). The global growth score was calculated as the sum of all responses, and ranged from 1 to 81, $M = 34.28$, $SD = 12.22$. The overall reliability of the scale was very good ($\alpha = 0.94$).

Ideological commitment

This questionnaire was specifically constructed for the current study to measure ideological commitment. Respondents were asked to rate the level each of 20 statements reflected their ideological commitment. Each statement was selected by judges (the researchers and an assistant) to reflect ideological items that are not concerned with political orientation (left or right political views), but reflect a level of ideological commitment. Three dimensions were selected to reflect: (a) practical commitment—which assesses participation in activities concerning political ideology (e.g., “I’m willing to participate in demonstrations”; $\alpha = 0.87$); (b) ideological conviction—which assesses youth confidence in ones political ideas. (e.g., “I’m willing to try to persuade other people to believe in my political views”; $\alpha = 0.68$); (c) intolerance of other political ideas—the youths’ feeling that other political

believes are wrong, dangerous and should not be heard (e.g., “It bothers me that some people hold political views opposite to mine”; $\alpha = 0.72$). The items are responded to on a 5 point scale ranging from 1 (not at all) to 5 (very much). Scale scores were computed by taking the mean of each participant’s responses to the relevant items. Since the dimensions were highly correlated a combined ideology scale was computed based on the sum of the three ideological measures ($\alpha = 0.83$).

Religious orientation

The revised religious orientation scale [17] was used to assess intrinsic and extrinsic religious orientation. The questionnaire was translated into Hebrew using back translation. Intrinsic religious orientation (I), refers to religion as an end in and of itself. There are two extrinsic religious orientations that reflect religion is an instrumental to serve an external purpose. Personal extrinsic orientation (EP) refers to achieving comfort and relief through religion, and social extrinsic orientation (ES) refers religion as the achievement of a social goal (e.g., connecting to a social group). Respondents were asked to rate the level that the 14 statements applied to them with a 6 point scale that ranged from 1(not at all) to 6 (very much). Each religious orientation scale was calculated by taking the sum of the relevant items. The reliability for the measures in the current sample are $\alpha = 0.77$ for I (vs. 0.83 for the original scale), $\alpha = 0.78$ for ES (vs. 0.58), and $\alpha = 0.82$ for EP (vs. 0.57). We combined the religiosity scales since they were significantly correlated and as others have done so (e.g., [13]).

Results

Exposure to terror attacks and growth

A majority of respondents (70.1%, $n = 2,092$) reported having been exposed to at least one terror incident. Of these 13.5% reported having been exposed to six or more terror incidents. Of the exposed adolescents ($n = 2,092$), 64.6% ($n = 1,351$) reported having felt some degree of fear. The zero-order correlations between all the study variables were calculated and surpassed statistical significance (see Table 1). Results indicated that that religiosity and ideology were positively associated with growth.

Mediating effects of religious and political ideology on the relationship between exposure, fear and growth

To assess the moderating/mediating effect of religiosity and political ideology we used the Baron and Kenny [4]

Table 1 Zero order correlations between the religious and ideological orientations and the growth dimensions

	Exposure	Fear	Religious orientation			Ideological commitment		
			Intrinsic	Social extrinsic	Personal extrinsic	Practical commitment	Conviction	Intolerance
PGI	0.26***	0.29***	0.27***	0.06**	0.30***	0.34***	0.34***	0.28***
Relationship	0.26***	0.32***	0.22***	0.06**	0.25***	0.29***	0.31***	0.25***
New possibilities	0.22***	0.19***	0.18***	0.08**	0.20***	0.30***	0.31***	0.22***
Personal strength	0.19***	0.21***	0.17***	0.08**	0.23***	0.24***	0.26***	0.20***
Spiritual change	0.28***	0.23***	0.48***	0.01	0.42***	0.35***	0.30***	0.30***
Appreciation of life	0.20***	0.33***	0.23***	-0.00	0.24***	0.27***	0.26***	0.22***

p* < 0.01, *p* < 0.001

Table 2 Coefficients of the [4] procedure to examine the mediating effects of religiosity and ideology on the relationship between exposure and posttraumatic growth

Dependent	Predictor	Mediator	<i>B</i>	SE	<i>t</i>
Growth	Exposure		1.10	0.10	10.36***
Religiosity	Exposure		0.69	0.08	8.05***
Growth	Religiosity	Exposure	0.33	0.02	11.99***
Growth	Exposure	Religiosity	0.87	0.10	8.37***
Sobel = 0.23, SE = 0.03, <i>Z</i> = 6.66, <i>p</i> < 0.001					
Growth	Fear		5.46	0.39	13.67***
Religiosity	Fear		1.80	0.34	5.30***
Growth	Religiosity	Fear	0.33	0.03	10.88***
Growth	Fear	Religiosity	4.85	0.38	12.54***
Sobel = 0.60, SE = 0.12, <i>Z</i> = 4.75, <i>p</i> < 0.001					
Growth	Exposure		1.32	0.08	15.16***
Ideology	Exposure		0.32	0.01	20.43***
Growth	Ideology	Exposure	1.64	0.09	16.64***
Growth	Exposure	Ideology	0.79	0.08	8.91***
Sobel = 0.52, SE = 0.04, <i>Z</i> = 12.89, <i>p</i> < 0.001					
Growth	Fear		4.68	0.31	14.74***
Ideology	Fear		0.23	0.06	3.77***
Growth	Ideology	Fear	1.68	0.10	15.32***
Growth	Fear	Ideology	4.29	0.30	14.23***
Sobel = 0.38, SE = 0.10, <i>Z</i> = 3.65, <i>p</i> < 0.001					
Growth	Religiosity		0.38	0.02	13.63***
Ideology	Religiosity		0.07	0.00	14.06***
Growth	Ideology	Religiosity	1.56	0.12	12.50***
Growth	Religiosity	Ideology	0.27	0.02	9.55***
Sobel = 0.11, SE = 0.01, <i>Z</i> = 9.33, <i>p</i> < 0.001					

* *p* < 0.05, ***p* < 0.01, ****p* < 0.001

4 step procedure. This permits the decomposition of effects in 4 steps. (1) exposure/fear direct effects growth; (2) exposure/fear direct effects religiosity/ideology (3) religiosity/ideology effects growth, controlling for exposure/fear and (4) examination of the effect of exposure/fear on growth controlling for mediator (religiosity/ideology). This procedure permits the examination of paths a, b and c in Fig. 1. In each step, exposure or fear was the predictor, growth was the dependent variable, and the mediator of ideology or religiosity was examined. These results, in

Table 2 showed that both ideology and religiosity had a mediating effect.

The model was also tested separately for each of the three religious and ideology dimensions. Results of these examinations indicated similar models to the one reported above, except for the socially extrinsic religious orientation. This orientation had no moderating or mediating effect. Together these findings were consistent with the notion that cultural worldview mediates the effects that exposure and fear have on growth.

In addition, we conducted a series of moderated regression models (path Z in Fig. 1). These results showed that ideology significantly moderated the relationship between fear and growth (interaction between fear and ideology: $\beta = 0.38$, $p < 0.001$). To examine the interaction we split the scores around the mean into high and low and plotted the relationship between growth and fear at high and low levels of ideology. These results show a strong dependency such that the relationship between fear and growth is linear among people who had high ideology scores only (Fig. 2).

Discussion

The current study aims to explore the role of religious and political ideology in PTG among youth who were exposed to terror. The results indicate that both political ideology and religiosity operate similarly by mediating the effect of fear and exposure on growth. This indicates that among youth the trajectory from traumatic effect to growth is arbitrated by the youth's cultural worldviews.

The ability of both religiosity and political ideology to mediate the effect of exposure is consistent with terror management theory assumptions [18]. According to this theory, cultural worldviews are formed due to human needs that transcend their vulnerability and inevitability death (reviews in Refs. [18, 46]). Thus when mortality is salient, as is in times of terror, the effect of the exposure and fear the terror cast is mediated by the individual cultural beliefs.

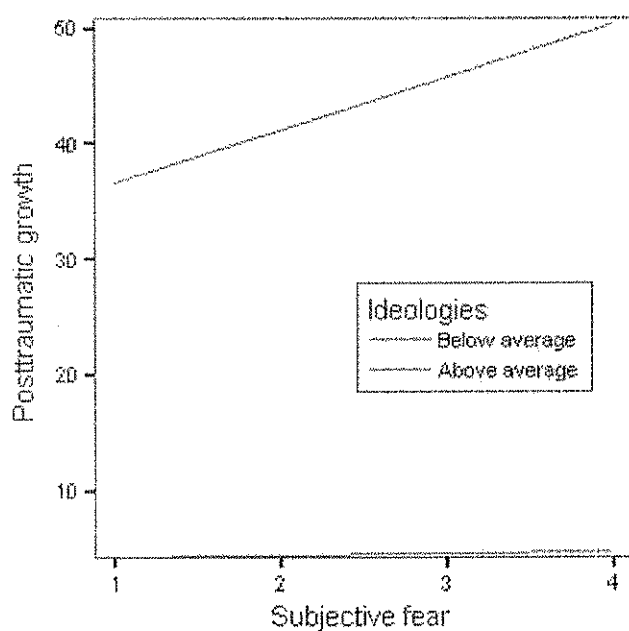


Fig. 2 The moderating effect of ideology on the relationship between fear and growth

It appears that holding cultural beliefs, be it religiosity or political ideology, intervenes directly on the effect of the exposure to traumatic events. This is consistent with the idea that the effect of exposure to an adverse event is depended on the subjective appraisal process [29]. Namely, it is the subjective interpretation of the event, rather than exposure per se, that determines its psychological outcome.

Both religiosity and political ideology mediate the effects of exposure and fear on growth, suggesting that they can contribute to our understanding the role of religiosity in posttraumatic growth. Past research has shown religiosity to be positively associated with growth and tends to attribute this association to some positive features in the religious belief (e.g., [6, 39, 55]). The current study's findings, however, suggest that this association is part of a vast network of possible positive associations that other well held cultural beliefs, such as political ideology may effect.

According to [21] traumatic events challenge and in some cases even threaten to shatter existing cognitive schemas regarding the self and the world. The world previous to the traumatic event seems to be predictable and benevolent, following tragedy, is been perceived as threatening, chaotic and malevolent. The goal of the survivor is to build new and more complex cognitive assumptions that can assimilate the traumatic event into the modified cognitive world views. Cultural worldviews, such as religiosity and political ideology may assist this process by making the traumatic event become more comprehensive and the fear becoming manageable [5, 14, 25, 35, 39]. As a result of the rebuilding of the complex cognitive assumptions and the assimilation of the traumatic event growth occurs [7, 22].

Although growth is consider as a positive process in which complex cognitive schema are build [7, 22], there are scholars who question its benevolent. Some researchers claim that growth is no more than a positive illusion [23, 32], self enhancing bias of wishful thinking (e.g., [8, 34]). Seen this way, it may be that the victim wants to believe that the traumatic event is not for nothing. The cultural worldview may enhance this illusive self enhancing bias by giving the victim a rationale to the suffering, such as God's will or being a soldier in the war between the good and the evil [5, 53].

Regardless if growth represent a positive change [7, 54], or a self enhancing bias [34], the results show, that cultural worldviews mediate the traumatic exposure and increases reports of growth. This may be since the cultural worldviews reduce the incomprehensibility of the traumatic event [22], sustain self worth [53] or even offer the believer symbolic immortality, thus reduce vulnerability [46]. Therefore, the exact mechanism through which the cultural worldview effects growth and the real nature of growth require further clarification.

Our results also indicate that ideology has a moderating effect on fear. Among highly ideological youth, fear is positively associated with growth. The more they are afraid, the more posttraumatic growth they report. This moderating effect is not found among less ideological youth. For less ideological youth, growth and fear are connected, but growth is not heightened with fear. This may indicate that unlike their un-ideological peers, more ideological youth tend to transmit their fears into growth. This may be the by-product of the type of the traumatic event examined in the current study. Namely, terror is a man made form of trauma resulting from opposing political ideological schema. As a political event, highly ideological youth can more easily use their ideological belief as a platform of changing their fear into a positive outcome (i.e., growth). This is consistent with findings suggesting that highly ideological youth cope better with political armed conflict than less ideological youth [27, 43, 45]. Another possibility, however, is that fear has a higher psychological cost for highly ideological youth [11]. Among this group, acknowledging fear is tantamount to admitting their ideological political world view may be incorrect or insufficiently robust to sustain the adversity of political conflict. Seen this way, more posttraumatic growth is a self enhancement bias that is reported more by ideological youth who have greater fears than their non-ideological peers.

Finally, we wanted to point out that one religious orientation does not have a mediating role on growth. This is the socially extrinsic orientation. This religious orientation has been found to be associated with negative emotional outcomes, such as anxiety and depression [26, 33, 38, 41]. This orientation reflects social control and is perceived as added stress on the youth [28]. Therefore, if growth reflect positive well being outcome, then it is reasonable to assume that no association will be found to socially extrinsic orientation.

Several limitations to the study should also be addressed. First, the relationship between religion and growth should be considered with caution, since growth consists of spiritual change and so inherently the two may somewhat overlap increasing the association between religiosity and growth. Second, religion and ideology are multi-dimensional variables. This study focused on several aspects of religion and ideology, yet does not cover the entire scope of these concepts. Thus, it would be prudent to assume that there is more to cultural obligation than what is studied here. Another limitation is that our study is cross-sectional and relies on self-reports. Future research should overcome these methodological limitations to provide stronger conclusions, and further our understanding of the association between cultural world views and growth. It is also be noted that our sample size, though sizeable is not

representative of Israeli adolescents, thus, warranting limitation with regard to extrapolation of the findings. Nonetheless, the sizeable sample and the focus on a less examined, but contemporary, social issue, contributes to the growing body of studies focusing on understanding youths' responses to terror and adversity.

In conclusion, the current findings delineate the effects of exposure and fear, and cultural beliefs (religiosity or political ideology) on growth. Our results reinforce our assumptions of terror management theory by showing that cultural beliefs mediate the effect of exposure to traumatic mortality salient event. The results have implications for understanding the growth process and the role previously found for religious belief. These findings imply that world views share common features that directly enhance growth following adversity due to terror in youth. The results also indicate that religiosity's effect on well being may be found regarding other cultural world views. Overall, this study contributes to our understanding of the human capacity to overcome hardships and the ability to achieve personal growth.

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