

POSTTRAUMATIC GROWTH IN ADOLESCENCE: THE ROLE OF RELIGIOSITY, DISTRESS, AND FORGIVENESS

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This study examines the role of religiosity in posttraumatic growth in Israeli religious, traditional, and secular adolescents ($n = 1482$; aged 16) who were exposed to terror events. Results showed that religious youth reported higher levels of growth than secular youth. Among secular and traditional youth posttraumatic symptoms and an unwillingness to forgive were positively associated with growth. For religious youth forgiveness was positively associated with growth. Fear of terror was positively associated with growth across the groups. These findings imply that since the predictors of growth vary by religiosity, it has different meanings depending on the religiosity of the youth. Growth seems to be a function of distress among secular and traditional but not religious youth. This extends our understanding of the role of religiosity in the posttraumatic growth process among adolescents following terror.

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Exposure to political violence in children and adolescents may cumulate in a range of adverse psychological effects. These include: posttraumatic stress disorder (PTSD), depression, anxiety, and behavioral problems (e.g., Hadi, 1999; Vizek-Vidovic, Kutervac-Jagodic, & Arambasic, 2000; Durakovic-Belko, Kulenovic, & Dapic, 2003). Concurrently, however, traumatic events may also result in positive outcomes. These include pro-social behavior (Macksoud & Aber, 1996; Saric, Zuzul, & Kerestes, 1994), increased self-esteem (Baker, 1990), and enhanced well-being (Bachar, Canetti, Bonne, Denour, & Shalev, 1997). These findings of positive outcomes support the salutogenic approach (Antonovsky, 1985) that contends that stressful events may concurrently produce negative and positive outcomes.

Positive outcomes of traumatic events have received considerably less attention than negative ones. Traumatic events however, may result in "posttraumatic growth" (Tedeschi & Calhoun, 1996), namely 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" (p. 458). Recent research has shown posttraumatic growth in adults exposed to various traumatic events (e.g., Park, Cohen, & Murch, 1996; McMillan & Fisher, 1998), including Holocaust (Lev-Wiesel & Amir, 2003), war (Powell, Rosner, Butollo, Tedeschi & Calhoun, 2003) and terror (Hobfoll et al., 2007; Ai, Cascio, Santangelo & Evans-Campbell, 2005). Little is known, however, about posttraumatic growth among children and adolescents, especially regarding war and terror (Linely & Joseph, 2004).

Youth are perceived by some researchers as particularly vulnerable to traumatic stress (Maercker, 1999). Youth lack mature coping skills, have fewer resources, are in the process of developing their sense of self, and may lack the abstract reasoning that may be necessary for posttraumatic growth to occur (Aldwin & Sutton, 1998; Compas, 1998). Growth also requires a level of cognitive sophistication that may be lacking in adolescence permitting the recognition of losses and gains (Cryder, Kilmer, Tedeschi, & Calhoun, 2006). Alternatively, youth may have a less solidified representational world that makes them more vulnerable to devastation yet concurrently more flexible (Janoff-Bulman, 1992). Their less firmly assumptive world beliefs may become more protective since they are open to potentially adaptive inputs, relative to adults, and hence increase the likelihood of growth. Collectively, therefore, it is not readily apparent the extent to which the process of growth among adoles-

cents, resembles that of adults. As such, the current study examines the correlates of growth among youth.

Posttraumatic growth has been observed among youth following life-threatening events and multiple stressful events. Among youth life-threatening events that have been found to be associated with growth include cancer (Kazak, Stuber, Barakat, & Meeske, 1996; Barakat, Alderfer, & Kazak, 2006), terror (Laufer & Solomon, 2006), hurricanes, floods and evacuation from homes. (Cryder et al., 2006). Growth has also been found following exposure to various negative life events that are not life threatening (Milam, Ritt-Olson, & Unger, 2004; Ickovics et al., 2006), such as indirect exposure to a terror attack (Millam, Ritt-Olson, Tan, Unger, & Nezami, 2005). This indicates that youth may be susceptible to various negative events that harm their well being.

Theoretically the level and severity of exposure to a traumatic event has long been considered one of the strongest predictors of growth among adults (Armeli, Gunthert, & Cohen, 2001; Tedeschi & Calhoun, 1996). Empirically, however, the association between the severity of the exposure to the event and growth is not readily apparent. Severity of the exposure in children has been reported to be unrelated to growth in some studies (e.g., Cryder et al., 2006; Millam et al., 2005), yet positively associated with growth in others (e.g., Laufer & Solomon, 2006; Milam et al., 2004; Ickovics et al., 2006). These studies indicate that more severe events induced more potent growth levels. Generally, the relationship between the nature and severity of exposure to traumatic events and growth among children is unclear and requires further examination (Cryder et al., 2006). Therefore the relationship between exposure and growth will be examined in the current study.

Generally PTG is considered a positive outcome, although this may be misleading sometimes, as Maerckler's Janus-face model of PTG suggests. Studies have shown that different instances of growth may be either pathogenic or salogenic (Hobfoll et al., 2007). For instance, following September 11th, self-enhancers saw themselves as having more positive outcomes, but their significant others noted that this often had detrimental effects (Bonanno, Rennie, & Dekel, 2005). Accordingly, growth may not necessarily act as a uniformly positive outcome, although in the literature it generally is considered as a positive outcome.

Nonetheless, a lack of clear research highlights that it is appropriate to examine the association between posttraumatic stress and

growth in youth. Among youth, the association between posttraumatic stress and growth has received insufficient attention. Some studies have shown that for serious life-threatening events, such as cancer or exposure to terror attack, growth is positively associated with PTSD (Barakat et al., 2006; Laufer & Solomon, 2006). However, no systematic relationship has been found between growth and PTSD measure among adults who were exposed to the Dresden bombing as a child (Maercker & Herrle, 2003). Collectively, this indicates that the relationship between growth and PTSD requires further examination. Therefore, the second aim of this study is to examine the relationship between PTSD and growth in youth.

Religiosity is a possible moderator of the relationship between distress and growth. There are indicators that religiosity plays a role in posttraumatic symptoms and growth (Maercker & Herrle, 2003). Studies have shown that religious people are more resilient, and have lower levels of posttraumatic symptoms compared to non-religious people when exposed to terror (Solomon & Berger, 2005; Soraski, 1996). Religiosity has also been associated with growth among adolescents. Religious youth report higher levels of growth following exposure to terror (Millam et al., 2005) and various stressful life events (Milam et al., 2004).

Common to religiosity and growth is the notion of a struggle and suffering as part of the believer's road to greater insight (Calhoun & Tedeschi, 2006). Religion offers believers cognitive schema to rationalize traumatic events and so the interpretation of a traumatic event may produce a more positive meaning (Koenig, 1995; McIntosh, Silver, & Wortman, 1993; Overcash, Calhoun, Cann, & Tedeschi, 1996). Religiosity therefore may play a pivotal role in the process of sense making and enhancing positive outcomes (Pargament, Desai & McConnell, 2006). As such, it appears appropriate to expand our understanding of the way religiosity effects growth following adversity.

Forgiveness appears to be integral to many religions and may have positive effects on the believer's well-being. Forgiveness has been shown to relate to improved well-being and the release of negative emotions resulting in decreased anger, resentment, guilt, and anxiety (Enright, Freedman, & Rique, 1998; Friedberg, Adonis, Von-Berger, & Suchday, 2005; Harris et al., 2006). When negative feelings are replaced with positive ones toward an offender, a change in perspective is possible (Fischer, 2006). Forgiveness therefore may enhance growth by enabling the person to release negative cognitions

(e.g., schema), affect and behaviors, and focus on positive strategies to bypass negative affect (Fischer, 2006; McCullough, 2000; Moeschberger, Dixon, Niens, & Cairns, 2005).

The association between forgiveness and growth has previously been examined only in adults (Fischer, 2006). That study examined survivors of the terror attack in Oklahoma City and reported that forgiveness did not relate to growth but did relate positively to posttraumatic symptoms severity. To extend that study it is appropriate to examine the survivors' level of religiosity, that may influence forgiveness, since the two have been shown to be associated in youths (Enright, Maria, & Radhi, 1989).

The current study examines growth in Israeli youth following terror attacks. The study aims to examine differences in growth according to level of religiosity. Specifically, the study will examine the relationship between posttraumatic growth with (a) exposure to terror, (b) fear, (c) posttraumatic symptoms, (d) forgiveness and unwilling to forgive, and (e) assessing the potentially moderating effects of religiosity.

METHOD

PARTICIPANTS

The sample consisted of 1,482 Jewish adolescents, aged 16. There were 909 (61.9%) girls and 560 (38.1%) boys. In Israel, Jewish religious identity is generally characterized by four identities: (1) The Ultra-Orthodox are strictly observant of the religious commands, are mostly isolated in their own communities refrain from interacting with secular media (e.g., television) or other sectors of the population, including secular Jews. The ultra-orthodox were not sampled. The remaining Jews of the population sampled included: (2) Religious—observe Jewish commands but participate in the activities of larger society ($n = 181$; 12.8%); (3) Traditionalists—do not strictly adhere to religious commands and are highly involved in the activities of the greater society ($n = 515$; 35.1%); and (4) Secular—do not generally practice religious commandments ($n = 772$; 52.6%). In Israel the population is represented most by the secularists (44%), followed by traditional (39%), religious (9%), and ultra-orthodox (8%) (Israeli Central Bureau of Statistics, 2009).

PROCEDURE

On receiving Israeli Ministry of Education approval, we contacted 14 high-school principals in cities and rural communities of various sizes. Four principals declined, due to excess work load and a lack of motivation to cooperate with academic research. Consenting schools were asked to transfer the pupils' parents a consent form explaining the research objectives and the voluntary nature of the study. All 14 schools were in the accepted international boundaries of Israel, 7 schools were in low exposed areas and 7 were in high exposed areas, therefore, the sample is not a representative sample of the schools in Israel. All parents agreed to participation, but twenty one pupils declined to participate. Questionnaires were administered by one of the researchers in May 2005 in class with a teacher present.

MEASURES

Exposure to Terror Attacks Questionnaire. The items referred to terror-related traumatic events to which adolescents in both groups may have been exposed (Laufer & Solomon, 2006). This instrument contains 22 items covering different levels of exposure to terror related events (e.g., I did not attend school because of security measures; Stones were thrown on a car of someone I know). Participants were asked to state whether or not they had experienced each event (Yes/No) and cumulative scores ranged from 0 to 22, with an average of 3.04 ($SD = 2.93$, $\alpha = .80$). Those who marked a Yes response were asked to grade their level of fear due to the event. Fear was measured on a 1 (not afraid) to 4 (extremely afraid) Likert scale ($M = 1.87$, $SD = 1.25$).

Life Event Questionnaire. Pupils were asked to state whether or not a certain event from a list of possible events occurred in the last year. The objective of this questionnaire was to assess the extent to which adolescents were exposed to difficult life events (not terror related) in the last year. Items related to divorce, passing away of a close person, severe illness of the pupil, severe illness of someone close, unemployment among one of the parents, immigration, car accident of pupil or a car accident of close person. The scores ranged from 0 to 11, with an average of 3.08 ($SD = 1.81$).

Forgiveness. Forgiveness and unwillingness to forgive were assessed by the Forgiveness Scale (Mullet, Houdbine, Laumonier, & Girard, 1998). This questionnaire was back translated into Hebrew by the authors. By employing factor analysis, two scales were constructed. Unwillingness to forgive included 11 items that referred to the obstacles or prerequisites prior to their willingness to forgive. ($M = 2.57$, $SD = .85$; $\alpha = .88$. For example: "I can not forgive even if the consequences of the material harm are minimal" or "my personal philosophy forbids me from forgiving." The second scale was labeled Forgiveness, includes 7 items ($M = 3.44$, $SD = 1.02$; $\alpha = .85$), and consists of items, such as "I can forgive easily even if I feel bad," "I can easily forgive, even when the offender has not apologized." Participants were asked to mark the option that best represents their view on a 6 (Totally Agree) to 1 (Totally Disagree) Likert scale. A Pearson correlation between the two variables indicated that they are related dimensions ($r = -.12$, $p < .001$).

Child Posttraumatic Stress Reaction Index (CPTS-RI). The Child Posttraumatic Stress Reaction Index (Pynoos, Frederick, Nader, & Arroyo, 1987) is a 20-item self-report questionnaire used to assess PTSD in youth, aged 10–17. Subjects respond on a 5-point Likert scale, where options range from 0 (not at all) to 4 (all the time). The scale has been widely used in trauma studies, and in its Hebrew version has acceptable levels of reliability and validity. Past ($\alpha = .91$; Laufer & Solomon, 2006) and current ($\alpha = .92$) $M = 3.13$, $SD = 7.55$ (Laufer & Solomon, 2009).

Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996), was used to assess post-traumatic growth, translated into Hebrew using back translation, and adapted by the authors for the present study. The PTGI contains 21 items, based on the five theoretical aspects of growth (Tedeschi & Calhoun, 1996) that include: new possibilities ($\alpha = .82$), relating to others ($\alpha = .85$), personal strength ($\alpha = .77$), spiritual change ($\alpha = .63$), and appreciation of life ($\alpha = .74$). 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). Growth scores were calculated as the sum of all responses, and ranged from 1 to 81, mean = 34.28, $SD = 12.22$. Four levels of growth were defined: no growth (1 to 21), low growth (22 to 43), medium growth (44 to 65), and high growth (66 to 81). The overall reliability of the scale was α

TABLE 1. Descriptive Statistics of the Study Scales by Level of Religiosity

<i>M</i>	Secular	Tradition	Religious		Pairwise
<i>SD</i>	<i>n</i> = 772	<i>n</i> = 515	<i>n</i> = 181	<i>F</i>	comparisons
Growth	32.57	36.18	36.30	16.54***	R, T > S
	11.49	12.78	12.51		
Relating to others	10.78	11.83	11.94	10.45***	R, T > S
	4.32	4.72	4.75		
New possibilities	7.08	7.62	7.09	5.27**	T>S,R
	2.96	3.25	2.78		
Personal strength	6.35	6.99	6.26	8.99***	T>S,R
	2.72	3.02	2.66		
Spiritual change	2.75	3.29	4.07	64.01***	R>T>S
	1.24	1.57	2.00		
Appreciation of life	5.60	6.43	7.24	37.54***	R>T>S
	2.47	2.57	2.59		
Objective exposure	2.92	3.20	3.23	1.75	
	2.76	3.32	2.48		
Subjective exposure	1.80	1.91	2.12	5.00**	R>S
	1.21	1.28	1.31		
Negative life events	3.14	3.12	2.65	5.81**	S,T>R
	1.82	1.79	1.67		
Unwilling to forgive	2.55	2.72	2.19	26.77***	S,T>R
	.83	.88	.66		
Forgiveness	3.44	3.32	3.80	14.52***	R>S,T
	1.01	1.00	1.01		
PTSD	2.94	3.57	2.77	1.36	
	7.27	8.00	7.58		

Note. R religious, S secular and T traditional. * $p < .05$; ** $p < .01$; *** $p < .001$

= .93, yielding comparable results to past research in Israeli youth ($\alpha = .94$, Laufer & Solomon, 2006).

RESULTS

Examination of the growth scale distribution indicated that most of the youth (68.3%) reported low levels of growth, almost a fifth of the youth (18.5%) had medium to high levels of growth, and 2.3% reported very high level of growth. A total of 10.9% of the youth

reported the absence of posttraumatic growth. To assess differences according to religiosity, ANOVA was conducted on the global growth score as well as on the five dimensions. The results, in Table 1, showed that the global growth scores were higher among religious and traditional youth than the secular youth. On the growth sub-scales, spiritual change and appreciation of life were highest among religious youth compared to traditional youth, which had higher levels compared to secular youth. Religious and traditional youth were higher than secular youth in relating to others. Traditional youth were higher than religious and secular youth on the new possibilities and personal strength scales.

ANOVA was conducted to distinguish posttraumatic symptoms, exposure and forgiveness by religiosity (see Table 1). Results indicated that there were no differences among the groups on posttraumatic symptoms and in their objective exposure. Religious youth reported higher subjective exposure (i.e., fear) compared with secular youth, and were exposed to less negative life events compared to both secular and traditional youth. Unwillingness to forgive was significantly higher among traditional and secular compared to religious youth. Forgiveness, however, was higher among religious than secular and traditional youth.

The hierarchical entry linear regression models in Table 2 were conducted separately for the three religious groups to assess the incremental contribution of the independent variables to posttraumatic growth. These results indicated that for secular youth, subjective exposure, posttraumatic symptoms, being female, and unwillingness to forgive all predicted growth (in descending order of the partial correlations coefficient). For traditional youth growth was associated with posttraumatic symptoms, unwillingness to forgive and subjective exposure (in descending order). For religious youth, subjective exposure, negative life events, forgiveness, and being male, were all linked with growth. Collectively the models explained 18% of the variance among secular youth, 13% among traditional youth, and 21% for religious youth. Posttraumatic symptom severity and unwillingness to forgive were positively associated with growth only for secular and traditional youth, yet forgiveness was associated with symptom severity only among religious youth. Results (not reported here) replicated these findings with a moderated regression approach including religiosity, exposure, and their interaction as predictors of posttraumatic growth. Due to the unequal sex distribution, models were re-examined by sex. These

TABLE 2. Regression Models of Growth by Level of Religiosity

	β Secular	β Traditional	β Religious
Gender	0.11**	-0.04	0.15*
Negative life events	0.01	0.07	0.15*
Objective exposure	0.07	0.07	0.16
Subjective exposure	0.23***	0.13*	0.21*
Unwilling to forgive	0.07*	0.13**	0.1
Forgiveness	0	0.06	0.15*
PTSD	0.17***	0.19***	0.01
Rsq.	17.70%	12.70%	20.8%
	F(7,751)22.93 $p < .001$	F(7,499) = 10.25 $P < .001$	F(7,170) = 6.11 $P < .001$

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

results showed that the explained variance was lower (probably due to the lack of the sex variable, reducing the number of parameters and degrees of freedom). Overall, however, the same general trend of statistical significance emerged for all study variables except that the associations with forgiveness and unwillingness to forgive became statistically insignificant.

Comparison of betas did not show significant differences between secular and traditional youth (see Table 3). Religious and secular youth significantly differed by gender, negative life events, forgiveness, and PTSD. Religious youth significantly differed from traditional youth on gender, and PTSD. Generally this reinforced the results, except for the comparison of unwilling to forgive which was not found to differ among groups.

A sub analysis of youth with high trauma exposure (three or more incidents $n = 701$) was conducted. Examination their growth levels revealed a similar picture to the main results. The mean growth levels, however, was higher among all the three exposed groups: $F(2,692) = 7.65$, $p < .001$, religious and traditional youth had higher level of growth compare to secular youth (mean levels of 39.58, 38.63, and 35.29, respectively).

TABLE 3. Comparison of Betas

	Religious and Secular	Religious and Traditional	Traditional and Secular
Gender	3.48 $p < .001$	3.10, $p < .01$	1.10, n.s.
Negative life events	2.34 $p < .05$	1.43, n.s.	1.23 n.s.
Objective exposure	1.28 n.s.	1.45, n.s.	-.15 n.s.
Subjective exposure	-.21 n.s.	.97 n.s.	-1.42 n.s.
Unwilling to forgive	.88 n.s.	.10, n.s.	1.28 n.s.
Forgiveness	2.27 $p < .05$	1.42, n.s.	1.13 n.s.
PTSD	-2.67 $p < .05$	-2.88 $p < .01$.23 n.s.

DISCUSSION

The current study examines the effects of religiosity on factors that covary with growth in youth exposed to terror. Overall most youth report some level of growth following exposure to terror. Religious and traditional youth report higher levels of growth than secular youth. The prediction of growth emerges as dependent on religiosity, reinforcing the argument that it acts as a moderator. Among secular and traditional youth, posttraumatic symptoms, and unwillingness to forgive positively relate to growth. Among religious youth, however, only forgiveness effects growth. Fear positively relates to growth among the three groups and so may be considered to have an effect independent of religiosity.

Our results indicate that religious and traditional youth report higher growth levels than secular youth. This finding is consistent with reports among adults (Calhoun, Cann, Tedeschi, & McMillan, 2000; Park et al., 1996; Tedeschi & Calhoun, 1996) and adolescents (Millam et al., 2005). The results of the current study also suggest that the dimensions of growth may differ according to religiosity. Religious youth tend to report higher levels of spiritual change and appreciation of life, than traditional and secular youth, yet traditional youth report higher levels of personal strength and the perception of having new possibilities. These group differences indicate that different aspects of growth carry different meanings for each group. It also may indicate that the overall growth level masks changes in a specific dimension.

There are several possible reasons to explain why religious believers report more growth. First, participation in religious practices

includes more encounters with other religious members, which encourages higher levels of social involvement and support (Scholte et al., 2004; Schuster et al., 2001; Taylor, Nailatikau, & Walkey, 2002) and may provide a sense of belonging (Lepore & Revenson, 2006) which may enhance growth.

Another manner in which religiosity may effect growth is by giving meaning to the traumatic events. Calhoun and Tedeschi (2006), posit that the growth process is in fact a rebuilding of fundamental cognitive schema that the traumatic event has shattered, thereby giving new meaning to assumptions and beliefs. Past research has shown that religious schema may accommodate stress and trauma (Overcash et al., 1996; McIntosh et al., 1993) giving it meaning according to religious perceptions (Murphy, Johnson, & Lohan, 2003).

In addition to the differences by religious group, differences in the predictors of, or pathways to growth are shown. The results show PTSD positively relates to growth only among secular and traditional, and not religious youth. This difference may be explained in two ways. First, growth may be no more than a mirror of PTSD, or a positive illusion that results from the intense suffering caused by the trauma and distress (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000; Westphal & Bonnano, 2007). According to Johnson and his colleagues (Johnson et al., 2007) the positive associations between PTSD and growth found in several studies (e.g., Laufer & Solomon, 2006) indicate that growth may not always possess a salutogenic nature. They believe that sometimes growth is a rationalization that allows the victim to remain unchanged. Seen this way our findings indicate that, among secular and traditional youth, growth is a cognitive rationalization, but not for religious youth.

An alternative explanation is that growth occurs only if the event had been traumatic enough to cause PTSD and forced the person to cope with its consequences (Tedeschi, Calhoun, & Cann, 2007). If there is no indication of distress then one is not forced to cope with the consequences of the event, and the posttraumatic growth process will not occur. Additionally, the growth process is a painful one that includes rebuilding one's schemas regarding the self and the world, and changing it to a more complex one (Janoff-Bulman, 2006). From this perspective, PTSD is key to growth, and as such a positive correlation between the two is expected. Therefore, the lack of association between PTSD and growth among the religious youth may indicate that they do not engage in the process of re-

building more complex cognitive schemas, hence, the growth process is more straightforward, or a positive illusion. Growth may be a kind of wishful thinking that inhibits real changes by masking suffering with an illusion of positive change (Maercker & Zoellner, 2004; Johnson et al., 2007; Helgeson, Reynolds, & Tomich, 2006).

Overall, the association between distress and growth found among secular and traditional youth may indicate that they do not truly experience positive changes. Alternatively, religious youth do not really change; indicating that growth is a mere positive illusion in the service of the self (Westphal & Bonanno, 2007; Davis & McKeearney, 2003). These two opposing explanations indicate how little is really known about the growth process. Only longitudinal and multimethod studies will enable us to better understand the implication and meaning of growth within and between cultural and religious groups.

Integral to the religious worldview is the notion of forgiveness. As such we expected forgiveness and growth to be related among the religious youth. Religious youth were indeed more likely to forgive than secular and traditional youth. This corroborates previous findings on religious adults (Enright & Coyle, 1998; Gorsuch & Hao, 1993; Poloma & Gallup, 1991) and adolescents (Enright et al., 1989). The results also indicated that forgiveness was associated with growth only for the religious youth. This was reinforced by the comparison of betas which indicated significant difference in the role of forgiveness among religious and secular youth. Overall, the positive association between forgiveness and growth among the religious youth supports the hypothesis that religiosity enhances growth since there is a mutual component to religiosity and growth, such as forgiveness (Calhoun & Tedeschi, 2006).

As for unwillingness to forgive, secular and traditional youth were found to be more unforgiving than religious counterparts. Examination of the beta, however, showed that the relationship between unwillingness to forgive and growth which was found among secular and traditional youth, did not differ by groups. This indicates that the role of unwilling to forgive should be further and better examined. It also illustrates that unforgiveness and forgiveness have discriminate validity each act differently on growth. This indicates the need to distinguish between forgiveness and unwillingness to forgive, in order to better understand their association with religiosity and growth.

Irrespective of religious grouping, fear was a strong predictor of growth. Namely, the more youth are afraid, the more growth is reported. This suggests that religiosity does not make the believer interpret terror events as less threatening than secular and traditional youth. Rather, collectively it seems that religiosity effects growth through the meaning it gives to the traumatic event (Overcash et al., 1996; McIntosh et al., 1993), and not by making it less frightening.

The results also show that the level of fear is more relevant to predicting growth than that of objective level of exposure. It seems that the subjective reaction plays a key role in deriving meaning from the traumatic event. The subjective interpretation of the event seems to be relevant especially when the effect of life threatening events are examined (e.g., Cryder et al., 2006). Therefore, it is appropriate to examine the subjective reaction to the event (level of fear) and not only the level of objective exposure.

Overall the study's findings suggest that at least two distinct pathways are produce growth following adversity, one for religious and one for other youth. The first includes PTSD, observed among secular and traditional youth, and the second active among the religious youth that correlates with forgiveness and not PTSD. These results imply that growth has different meaning to different religious groups.

There are four main limitations to the current study and directions for future research. A key limitation of this research is the unequal sex ratio skewing more towards females. Therefore, the results of the study should be studied with caution since growth differs between the sexes. Past research examining the processes between the sexes indicates that similar processes produce both (Laufer & Solomon, 2009). Secondly, the current study investigates Israeli Jewish youth. Although there are marked similarities between the assumptions of mainstream religions, when dealing with religiosity and its implications for growth, differences between religions is warranted. Third, in this study only two indicators of forgiveness are examined, although, forgiveness is multi-dimensional. This was reinforced by our findings since forgiveness and unwilling to forgive had different effects on growth, indicating they may not be opposites. Research is required to examine the role of forgiveness and unwilling to forgive in the growth process. This will enable us to understand the mechanisms of growth and whether it reflects a true change due to trauma or a positive bias. Similarly, the meaning of forgiveness differs between youths and adults. For adolescents, forgiveness has

more to do with group conformity and pressure, thus these factors may also effect the growth following trauma (Enright et al., 1989). Fourth, methodologically the present study is a self-report and as such, uses a single method. Despite these limitations the current study seems to advance our understanding of the process that produce growth and the effects of religiosity on the ability to persevere in the face of adversary.

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