



Protective factors associated with resilient functioning in young adulthood after childhood exposure to violence



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ABSTRACT

Children may be subjected to many forms of violence and a significant number will experience multiple victimizations. These children are at high risk for developing psychological and emotional difficulties that may last into adulthood. Despite the increased risk for psychopathology, a substantial percentage of young adults exhibit resilient functioning following a history of childhood violence. This study examines the role of social support, spirituality, and emotional intelligence in promoting resilience during emerging adulthood. Participants included 321 young adult American college students, age 18–24, who experienced childhood violence, including community violence, interpersonal aggression, child maltreatment, peer/sibling victimization, and/or sexual assault. Findings revealed that this sample was highly victimized, with an average of 9 violent experiences reported during childhood. Hierarchical multiple regression analyses indicated that after controlling for exposure to childhood victimization, other potentially traumatic events, and current depression and anxiety symptoms, higher resilience during emerging adulthood was associated with greater spirituality, greater emotional intelligence, and support from friends (but not from family). Findings suggest that the potency of protective factors outweighs that of adversity and psychopathology when predicting resilient functioning. By identifying variables that can enhance resilience, this study offers unique insight into how functioning may be improved by both individual and environmental factors.

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Introduction

Childhood exposure to violence has been a pressing public and mental health issue for some time, with large national studies bringing its pervasiveness to light (Finkelhor, Ormrod, Turner, & Hamby, 2005; Finkelhor, Turner, Ormrod, & Hamby, 2009). These studies have shown that American children are exposed to multiple types of violence during childhood, including assaults and bullying, sexual victimization, maltreatment, property victimization, and eye-witness experiences/indirect exposures to violence. In fact, when violence is assessed in such a comprehensive way, only 29% of American youth had no victimization experiences in the past year (Finkelhor et al., 2005). Throughout the United States, significant interdisciplinary and public policy efforts have been aimed at preventing childhood exposure to violence, and there is evidence to suggest that these efforts have resulted in some success in alleviating children's distress in specific domains (e.g., bullying, sexual victimization; Finkelhor, Shattuck, Turner, & Hamby, 2014). It remains true, however, that many American children are at great risk for exposure to violence and its negative consequences. Important, too, is the recognition that many children are

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able to successfully navigate these adverse events and are later able to function quite successfully as emerging adults. The current study considers the role of specific protective factors, namely social support, spirituality, and emotional intelligence, in the relationship between childhood exposure to violence and resilient functioning in emerging adulthood. Emerging adults represent a unique population because they are poised to make independent decisions about their lifestyles, careers, and future, but are still engaged in a number of structured and policy-driven social organizations such as colleges, technical schools, or volunteer corps. For this reason, identifying potential contributing factors linked to risk and resilience in early adulthood may be particularly useful in effectively reaching at-risk populations during a key developmental transition.

Central to contemporary research on childhood exposure to violence has been a call for a decrease in “silo-ed” work on violence that focuses on a single type of exposure (e.g., sexual abuse) (Hamby & Grych, 2013). This is in part because research has demonstrated consistent overlap between types of violence exposure, with many children experiencing multiple forms of victimization (Finkelhor et al., 2005; Graham-Bermann, Castor, Miller, & Howell, 2012; Margolin, Vickerman, Oliver, & Gordis, 2010; Miller, Grubell, Thomas, Bermann, & Graham-Bermann, 2012). In the context of violence exposure, children can have single experiences (“mono-victims”), repeated experiences of one type of violence (“repeat victims”, e.g., multiple instances of exposure to community violence) or several types of violent exposures (“poly-victims”, e.g., exposure to both sexual abuse and intimate partner violence) (Hamby & Grych, 2013). Children who are poly-victimized are at significantly higher risk for mental health problems, such as posttraumatic stress symptoms, even compared to those children who are repeatedly victimized within the same typology (Finkelhor et al., 2005).

Examining poly-victimization is critical to enhancing understanding of the ramifications of childhood exposure to violence. Empirical work on poly-victimization has generally shown a dose-response effect of violence exposure on a range of negative outcomes including, posttraumatic stress, depression, anxiety, somatic complaints and delinquency (Finkelhor, Ormrod, & Turner, 2007; Margolin et al., 2010). The powerful cumulative effect of poly-victimization has also been identified in samples of early adults with a history of exposure to violence (Richmond, Elliot, Pierce, Aspelmeier, & Alexander, 2009) and has demonstrated that early adults are multiply influenced by several types of abuse experiences and characteristics (Miller, Cater, Howell, & Graham-Bermann, 2014).

It is therefore clear that childhood exposure to such adversities has serious and long-term consequences for mental health. For adults, adverse events in childhood have been linked to higher rates of lifetime and recent depressive disorders, a risk which increases dramatically with the presence of compound exposures (Chapman et al., 2004). Adverse events and violence in childhood have also been linked with the presence of anxiety symptoms (Sareen et al., 2013) and increased risk for attempted suicide (Dube et al., 2001). The presence of depression and/or depressed mood in emerging adulthood has been found to decrease academic performance (Deroma, Leach, & Leverett, 2009) and increase enrollment gaps among college students (Arria et al., 2013). The harmful effects of childhood exposure to violence may therefore pose developmentally-specific challenges for emerging adults as they navigate transitions between mandatory education, higher education, and career training.

Although many children and adults exhibit social, emotional, and behavioral difficulties resultant from childhood exposure to violence, a substantial portion are able to demonstrate resilient functioning. A burgeoning field of theoretical and empirical work over the past several years, resilience has been conceptualized in a variety of ways. The most current conceptualizations view resilience as adaptive functioning after adversity or trauma that is dynamic and multi-systemic (Masten, 2011; Masten & Narayan, 2012). Theoretical and empirical work indicates that resilience should generally be negatively related to psychopathology and poor adaptation (Cicchetti, Rogosch, Lynch, & Holt, 1993). It is not, however, simply the absence of psychopathology, as a person exhibiting resilience will maintain stable and healthy levels of functioning or even experience positive adaptation in the aftermath of an adverse event (Bonanno, 2004; Luthar, 2006).

Over time, resilient functioning has been assessed in a range of different ways and has considered everything from individual-level “hardiness” and the ability to bounce back (Smith et al., 2008) to growth after trauma (Tedeschi & Calhoun, 2004) to social competence across contexts (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003; Howell, Graham-Bermann, Czyz, & Lilly, 2010). The multitude of definitions has led to empirical challenges in assessing resilient functioning, but given the breadth of conceptualizations and the number of processes related to resilient functioning across the social ecology (Masten & Narayan, 2012), it is critical that empirical scientists utilize a more complex and constructionist view of resilience that simultaneously reflects multiple, transactional processes across systems (Ungar, 2004; Wyman, 2003). The current study seeks to accomplish this goal by including in the analysis factors that may be associated with lower levels of resilient functioning (i.e., stressful life events, exposure to violence, symptoms of depression and anxiety), those that are representative of individual-level protective factors (i.e., spirituality, emotional intelligence) and protective factors in the individual's larger social system (i.e., support networks of family/friends).

Although theoretical work on resilient functioning abounds, and there has been significant empirical work on children exposed to violence, there are relatively few studies examining resilience in adulthood and almost none that examine emerging adults. One longitudinal study that has considered emerging adults with a history of childhood adversity (including, but not limited to violence exposure) found that those who ranked in the top quartile on resilience assessments in childhood had dramatically lower rates of internalizing and externalizing behavior problems (Fergusson & Horwood, 2003; Luthar, 2003). Understanding the extent to which emerging adults exhibit resilient functioning after childhood trauma is useful for programming and policy in the context of higher education, where many young adults are actively engaged. Indeed, intervention at this time may be relatively critical for helping emerging adults succeed during a time in which developing high-risk patterns of behavior is relatively common (Smith et al., 2011).

Fortunately, there is empirical evidence upon which we can make reasonable hypotheses about what protective factors might contribute to resilient functioning in young adulthood. Here, protective factors refer to characteristics of an individual's behavior or relationships that reduce the likelihood of dysfunction or promote successful functioning (Ladd & Burgess, 2001). One protective factor garnering attention among researchers assessing children is social support. For example, the Centers for Disease Control and Prevention (CDC, 2014) recently established safe, secure, and nurturing relationships (SSNRs) as a fundamental component in the development of children and the prevention of childhood adverse events. Based on empirical evidence, the CDC stresses the importance of SSNRs' stable and predictable nature, as it allows children to feel safe and secure. These relationships are critical to brain development, as well as emotional, social, behavioral, and intellectual abilities (Centers for Disease Control & Prevention, 2014).

Although not frequently studied in adult populations with a history of childhood violence exposure, the presence of ample social support has regularly and reliably been linked to positive outcomes, such as reduced loneliness and better transitions to college (Mattanah et al., 2010) and fewer adjustment problems (Pettit, Erath, Lansford, Dodge, & Bates, 2011). Research on traumatized populations also shows the potentially powerful role of social support from family and friends in recovery from mental health problems (e.g., Tsai, Harpaz-Rotem, Pietrzak, & Southwick, 2012) and in the maintenance of self-esteem across childhood (Bolger & Patterson, 2003; Luthar, 2003). One meta-analysis of the large body of empirical work on social networks revealed that although the quantity of members in ones' social network is linked to well-being, the quality of these relationships is more important (Pinquart & Sörensen, 2000). For this reason, measures of social networks that combine assessments of quantity and quality, such as the *Lubben Social Network Scale* (Lubben, Gironde, & Lee, 2001), may be of particular value in examining the influence of social networks on resilient functioning in violence-exposed populations. Using measures that include language regarding the quality of the relationship is especially important for those with a history of violence, who may experience lower quality relationships (Shen, 2009).

While violence exposure might be linked to a reduction in relationship quality, emotional intelligence has been shown to facilitate more positive connections with both parents and friends, as well as higher social competence (Lopes, Salovey, & Straus, 2003; Yip & Martin, 2006). In addition to its positive influence on social relationships, emotional intelligence has been associated with resilient functioning after difficult life events (Armstrong, Galligan, & Critchley, 2011). Researchers postulate that this association may be linked to enhancements made in coping capacities via emotional intelligence (Zeidner, Matthews, & Roberts, 2006) – a hypothesis that has thus far been borne out in consequent empirical work (Saklofske, Austin, Galloway, & Davidson, 2007). Far fewer studies have examined the influence of cognitive abilities on resilience. Overall, there is evidence that exposure to violence is linked to lower achievement and cognitive abilities in childhood (Delaney-Black et al., 2002; Graham-Bermann, Howell, Miller, Kwek, & Lilly, 2010), but in samples of adults, cognitive abilities have been found to be unrelated to resilient functioning (Friborg et al., 2003). In sum, emotional intelligence is consistently linked to processes associated with resilient functioning (e.g., prosocial skills, social networks), while the support for cognitive intelligence as a contributor to resilience is less compelling.

Finally, spirituality has also emerged as a core component of resilient functioning, with theoretical models highlighting the key role that spirituality may play for individuals experiencing adversity (e.g., Underwood, 1999). With regard to trauma and spirituality, it is postulated that spirituality may help foster a sense of meaning and integrated life story for survivors of trauma that could prove critical to healing (Peres, Moreira-Almeida, Nasello, & Koenig, 2007) and provide important structures for coping (Farley, 2007). In empirical investigations, however, the magnitude and direction of effects has varied. For example, in one study by Connor et al. (2003), general spiritual belief was related to poor outcomes. Overall, however, it seems that there is more evidence to suggest that spirituality, especially when used as a part of one's compendium of coping strategies, is linked to resilient functioning (Shaw, Joseph, & Linley, 2005). There is also evidence that spiritually is linked to higher rates of social support and optimism (Salsman, Brown, Brechting, & Carlson, 2005).

Current Study

Taken together, it is clear that social support, emotional intelligence, and spirituality are inter-related constructs that may contribute to resilient functioning following significant adversity. What is not clear, however, is if the associative strength of these protective factors holds once others are accounted for. Although there are many other protective factors that may contribute to resilient functioning, the current study elected to examine these three given the high level of empirical support for each, individually. Despite the existence of research demonstrating contributing factors to resilience, relatively few studies have examined these connections in tandem as they pertain to young adults with a history of childhood traumatic life experiences. Emerging adulthood is an especially critical developmental period to examine because it is a time in which individuals develop increased autonomy from family members and learn to manage new adult responsibilities (Fergus & Zimmerman, 2005). Gaining a more concrete understanding of the specific protective factors that may act as pathways to resilient functioning could be a key step for fostering the long-term mental health of individuals in this emerging adulthood age group. It is hypothesized that (1) there will be an inverse association between the cumulative number of childhood violence victimizations and resilient functioning in emerging adults, (2) controlling for childhood cumulative violence exposure, lifetime exposure to traumatic events and symptoms of depression and anxiety will be negatively related to resilient functioning in young adults, and (3) after controlling for exposure to adversity (childhood cumulative victimization and lifetime traumatic stress experiences), as well as current psychopathology (symptoms of depression and anxiety), higher

resiliency will be associated with greater spirituality, greater emotional intelligence, and more social support from both family and friends.

Method

Participants

Participants included 321 young adult American college students (71.3% female), age 18 to 24 ($M = 19.18$, $SD = 1.39$), who experienced childhood violence, such as community violence, interpersonal aggression, child maltreatment, peer/sibling victimization, and/or sexual assault. Individuals were excluded from study participation if they were under age 18 or over age 24 or if they were not able to read English. Participants' identified racial and ethnic backgrounds were varied, with 66.0% Caucasian, 19.0% African American, 5.6% Biracial/Multiracial, 4.0% Hispanic/Latino, 3.7% East Asian, and 1.7% other. The sample was relatively affluent, with the largest percentage (31.9%) reporting a family income greater than 150,000 USD; however, there was variability in income, with 28.1% of participant's below 60,000 USD. More than half (51.1%) of participants were in their first year of college and 21.6% were first generation college students.

Procedures

Following IRB approval in the fall of 2013, students from two universities in the Midwest and Southeast United States were recruited through the Department of Psychology subject pool system. The psychology subject pool includes undergraduate students in psychology courses who are invited to participate in research studies as part of their educational experience. Participants self-selected into this study and were informed that all aspects of it would be completed online, that it would take approximately 2 hours, and that they would receive psychology course credit. Study recruitment, consent procedures, survey administration, and debriefing were completed online from any computer of the participant's choosing. As such, participants did not meet with study staff members at any point during the study, which increased anonymity and privacy.

Participants provided demographic information and completed a battery of self-report questionnaires that assessed their childhood experiences with aggression and victimization, as well as their current psychosocial functioning, social networks, and resilience. Given the sensitivity of some of the questions, a list of local and national mental health resources, as well local resources that provide support or counseling, was made available to all participants at the beginning and end of the survey. Additionally, contact information for the principal investigators was provided so that all participants could connect with staff members should they have questions or concerns about the information gathered during the study.

Measures

Demographics. Participants completed a demographics questionnaire to gather basic background information, such as age, gender, family income, ethnicity, and education.

Juvenile Victimization Questionnaire – Adult Retrospective – Short Form (JVQR2). The JVQR2 is a 34-item self-report measure that examines different forms of victimizations adults retrospectively report experiencing during childhood (Hamby, Finkelhor, Ormrod, & Turner, 2004). Individuals are asked (yes/no) if certain experiences have happened to them from birth to age 17. The JVQR2 assesses a wide range of experiences, both in terms of frequency of victimization as well as severity of victimization, including property crime, physical assault, child maltreatment, peer/sibling violence, witnessed/indirect victimization, and sexual assault. Five additional items examining childhood exposure to intimate partner violence were also included. Affirmative responses to each form of victimization are summed to create a total score. The JVQR2 has been used in several studies assessing young adults' recollections of childhood victimization experiences (Elliott, Alexander, Pierce, Aspelmeier, & Richmond, 2009; Richmond et al., 2009). Given that participants may experience one violent event without necessarily experiencing another, JVQR2 items need not be related; therefore reliability was not calculated.

Connor-Davidson Resilience Scale (CD-RISC). The CD-RISC (Connor & Davidson, 2003) is a self-report measure consisting of 25 items that assess participant's ability to respond to stress and adversity. Items represent five domains that reflect major dimensions of resilience, including personal competence/high standards/tenacity, trust in one's instincts, positive acceptance of change and secure relationships, control, and influences from a higher power. The measure utilizes a five-point Likert scale, ranging from not true at all to true nearly all of the time, with items summed to create a total score. The measure has strong psychometric properties, with established construct and discriminant validity, an overall scale internal consistency of $\alpha = .89$, item-total correlations ranging from .30 to .70, and an interclass correlation coefficient of .87 (Connor & Davidson, 2003). In the present study, $\alpha = .97$.

Depression, Anxiety, and Stress Scale – 21 (DASS-21). The DASS-21 is comprised of three self-report subscales, each containing 7 items, that evaluate depression, anxiety and stress (Lovibond & Lovibond, 1995). In the present study, the Anxiety and Depression subscales were used. The Depression subscale assesses dysphoria, hopelessness, devaluation of life, lack of interest/involvement, and anhedonia, while the Anxiety subscale examines autonomic arousal, situational anxiety, and

subjective experiences of anxious affect. Participants were asked to estimate how relevant each item was to them on a four-point Likert scale, with response options ranging from never to almost always. Responses are summed to create a total subscale score. The DASS-21 has good internal consistency reliability, with alpha coefficients ranging from .80 to .94, as well as adequate construct and discriminant validity (Antony, Bieling, Cox, Enns, & Swinson, 1998). In the present study, subscale reliabilities were $\alpha = .93$ on the Depression subscale and $\alpha = .87$ on the Anxiety subscale.

Life Events Checklist (LEC). The LEC is a 17-item self-report measure designed to screen for lifetime exposure to potentially traumatic events, including a natural disaster, transportation accident, other serious accident, assault, combat, other life-threatening event or serious injury, and sudden, unexpected death of a loved one (Gray, Litz, Hsu, & Lombardo, 2004). In previous research, this measure has demonstrated adequate construct, convergent and discriminant validity as a stand-alone assessment of traumatic exposure (Gray et al., 2004). Reliability was not calculated for this measure because participants may experience one potentially traumatic event without necessarily experiencing another, so LEC items need not be related.

Brief Emotional Intelligence Scale (BEIS-10). The BEIS-10 assesses interpersonal and intrapersonal emotional functioning using a 10-item self-report measure that is based on the 33-item Emotional Intelligence Scale (Schutte et al., 1998). Participants estimated the extent to which they agreed or disagreed with items examining emotion appraisal, emotion regulation, and emotion utilization on a five-point Likert scale, ranging from strongly disagree to strongly agree. The BEIS-10 has good internal consistency, with alpha coefficients ranging from .87 to .89, as well as good test-retest reliability, with the proportion of agreement scores ranging from 89.2% to 96.4% over a two-week period (Davies, Lane, Devonport, & Scott, 2010). In the present study, reliability for the BEIS-10 was $\alpha = .83$.

Daily Spiritual Experience Scale (DSES). The DSES is a 15-item self-report measure of participants' perceptions of their spiritual quality of life (Underwood, 2011; Underwood & Teresi, 2002). The DSES includes major dimensions of spirituality such as personal intimacy with a higher power, strength and comfort, perceived divine love, inspiration or discernment, transcendence, and internal integration. Items are assessed on a six-point Likert scale, ranging from never to many times a day. The DSES has established high internal consistency reliability, with alpha coefficients of .94 to .95, and adequate construct and discriminant validity (Underwood & Teresi, 2002). In the present study, reliability was $\alpha = .97$.

Lubben Social Network Scale – Revised (LSNS-R). The LSNS-R is a 12-item self-report measure used to evaluate the level of perceived social support from family and friends (Lubben et al., 2001). It utilizes a six-point Likert scale ranging from 0 (least connected) to 5 (most connected), with items summed separately for family and friends to create total scores. Item content is consistent across family and friend questions, with only the social support network changing (e.g., “How many relatives do you feel at ease with, like you can talk about private or personal matters?” versus “How many friends do you feel at ease with, like you can talk about private or personal matters?”). The LSNS-R has adequate internal consistency, with an alpha coefficient of .78 (Lubben et al., 2001). In the present study, subscale reliabilities were $\alpha = .79$ on the Family subscale and $\alpha = .84$ on the Friend subscale.

Data Analytic Plan

All study hypotheses were examined using hierarchical multiple regression analyses in SPSS version 21.0. The cumulative number of childhood victimizations was entered in Step 1 to assess the relationship between violence exposure during childhood and current resilient functioning. Current symptoms of depression and anxiety and lifetime traumatic stress experiences were entered in Step 2, and spirituality, emotional intelligence, and social support were entered in Step 3. Social support from friends was measured separately from family social support. In sum, variables associated with adversity or problematic functioning were controlled for in the final step, which assessed protective factors that may be linked to enhanced resilience. In addition to examining whether each successive step improved the prediction of a given resilience outcome, individual variables were examined for their independent relationship to the outcome.

Results

Descriptive statistics for the study variables are provided in Table 1. All participants reported experiencing victimization during childhood, with an average of 9.05 ($SD = 6.25$) incidents. The most frequently experienced form of victimization was from a peer or sibling, which was endorsed by 93% of participants. Examples of this type of victimization include being attacked by a group of kids or a gang and being hit or slapped by a boyfriend/girlfriend. Other commonly cited victimizations were exposure to conventional crime (83.3%), such as being hit or attacked on purpose with an object or weapon and being stolen from, as well as indirect victimization (69.9%), including seeing someone get attacked on purpose with an object that could hurt and being in a place where others were being shot, bombs were going off, or there were riots. Intercorrelations among the study dependent variable and continuous predictor variables ranged from $r = .01$ to $.56$ and are found in Table 2. Multicollinearity diagnostics were examined using the variance inflation factor (VIF) and all values fell within an acceptable range ($VIF < 3$).

Table 1

Descriptive statistics for study measures.

Measure	Mean	SD	Minimum	Maximum	Cronbach's alpha (α)
CD-RISC	70.70	17.33	0	100	.97
JVQR2	9.05	6.25	1	30	–
LEC	1.67	1.62	0	8	–
DASS-21					
Depression	13.43	8.90	7	47	.93
Anxiety	12.11	7.23	7	39	.87
DSES	48.52	18.79	16	94	.97
BEIS-10	39.83	4.21	25	50	.83
LSNS-R					
Family	22.57	5.10	4	32	.79
Friend	24.07	5.39	3	33	.84

Notes: $N = 321$; CD-RISC, Connor-Davidson Resilience Scale; JVQR2, Juvenile Victimization Questionnaire – Adult Retrospective (JVQR2); LEC, Life Events Checklist; DASS-21, Depression, Anxiety, and Stress Scale – 21; DSES, Daily Spiritual Experiences Scale; BEIS-10, Brief Emotional Intelligence Scale; LSNS-R, Lubben Social Network Scale–Revised.

Table 2

Intercorrelations of predictor variables and resilience as measured by the Connor-Davidson Resilience Scale (CD-RISC).

Variable	1	2	3	4	5	6	7	8	9
1. CD-RISC	1	–	–	–	–	–	–	–	–
2. JVQR2	–.07	1	–	–	–	–	–	–	–
3. LEC	–.01	.58**	1	–	–	–	–	–	–
4. Depression	–.37**	.33**	.26**	1	–	–	–	–	–
5. Anxiety	–.28**	.31**	.31**	.78**	1	–	–	–	–
6. Spirituality	.38**	–.01	.08	–.12*	.01	1	–	–	–
7. Emotional Intelligence	.56**	–.03	.03	–.28**	–.20**	.26**	1	–	–
8. LSNS-R – Family	.29**	–.26**	–.11	–.28**	–.15*	.20**	.21**	1	–
9. LSNS-R – Friends	.24**	–.16**	–.01	–.17**	–.14*	.04	.22**	.35**	1

CD-RISC, Connor-Davidson Resilience Scale; JVQR2, Juvenile Victimization Questionnaire – Adult Retrospective (JVQR2); LEC, Life Events Checklist; LSNS-R, Lubben Social Network Scale – Revised.

* $p < .05$.

** $p < .01$.

Table 3 presents results of the hierarchical linear regression model. Cumulative childhood victimization entered as the sole predictor variable in Step 1 yielded a significant model that accounted for 2.4% of the variance in resilience total scores, $F(1, 247) = 6.03$; $p = .02$. In this model, fewer childhood victimizations were associated with greater resiliency in young adulthood ($\beta = -.15$; $p = .02$), which supports the first study hypothesis. When current symptoms of depression and anxiety, as well as stressful life events were entered in Step 2, the model was significant ($F(4, 244) = 9.81$; $p < .001$) and there was an increase in the amount of variance explained (13.9%). In this model, cumulative childhood victimization was no longer significantly linked to resiliency in young adulthood. Similarly, current levels of anxiety and lifetime stressful life events did not reach

Table 3

Summary of hierarchical regression analysis predicting to resilience.

Variable	Resilience				
	β	t	R^2	ΔR^2	F
Step 1			.024	.024	6.03*
Childhood Victimization	–.154	–2.46*			
Step 2			.139	.115	9.81**
Childhood Victimization	–.068	–.909			
Stressful Life Events	.095	1.29			
Depression	–.352	–3.68**			
Anxiety	–.020	–.213			
Step 3			.428	.289	22.42**
Childhood Victimization	–.008	–.122			
Stressful Life Events	–.021	–.340			
Depression	–.132	–1.62			
Anxiety	–.060	–.762			
Spirituality	.229	4.39**			
Emotional Intelligence	.387	7.01**			
Support – Family	.089	1.61			
Support – Friends	.126	2.32*			

* $p < .05$.

** $p < .01$.

significance ($p > .05$). Current depressed mood, however, contributed significantly to the prediction of variance in young adult's resilience scores, such that higher scores on the measure of depressed mood were associated with lower scores on the measure of resilience ($\beta = -.35$; $p < .001$). These findings partially support hypothesis two, as one form of mental health (depressed mood) was inversely associated with current resilient functioning.

When spirituality, emotional intelligence, and social support were entered in the final step, the model reached significance ($F(8, 240) = 22.42$; $p < .001$) and there was a substantial increase in the variance accounted for in the resilience measure (42.8%). In this model, spirituality ($\beta = .23$; $p < .001$) and emotional intelligence ($\beta = .39$; $p < .001$) both emerged as significant predictors, such that more frequent spiritual experiences and greater emotional intelligence were associated with higher resilience scores. Further, current social support from friends, but not family, was a significant predictor of resilience in young adulthood ($\beta = .13$; $p = .021$), in that greater support from friends was associated with higher resilience scores. All other variables did not reach significance ($p \geq .05$). In sum, after controlling for exposure to childhood victimization, other potentially traumatic events, and current symptoms of depression and anxiety, higher resilience was associated with greater spirituality, greater emotional intelligence, and support from friends (but not from family). Such findings support nearly all aspects of the third study hypothesis, with the only unsubstantiated prediction found in the relationship between family support and resilient functioning.

Discussion

This study examines differential predictors of resilient functioning in emerging adults who reported experiencing violence during childhood, focusing on social and environmental factors that may impact resilience. This broader approach provides important insight into the multitude of variables that may enhance or diminish resilient functioning following adversity. Study findings underscore the importance of current directions taken by previous researchers to assess poly-victimization (e.g., Finkelhor et al., 2009), as participants endorsed an average of 9 violent events during childhood and the number of violent events was directly and inversely associated with resilient functioning. As has been seen in previous work (Margolin et al., 2010), the cumulative impact of violence exposure is insidious, as greater poly-victimization was associated with current detriments in resilient functioning.

Using hierarchical multiple regression, the current study then examined the contribution of symptoms of psychopathology (depression, anxiety) to young adults' resilience. In this step of the model, depressed mood emerged as the only significant predictor. It is possible that in the current study the high correlation between depression and anxiety may have made it difficult to detect unique effects, but in other examinations of resilience, depression and anxiety have both been independent predictors of resilience, even when they are highly related ($r = .77$; Min, Yu, Lee, & Chae, 2013). Importantly, the assessment of anxiety used in the current study focused on physiological arousal symptoms associated with anxiety (e.g., heart pounding), rather than cognitive components (e.g., worry, irritability). It may be that resilience is more strongly influenced by these cognitive components than by more physical manifestations of anxiety, but this hypothesis requires further study. The significant association between depression and resilience, however, is highly consistent with other work (Connor, Davidson, & Lee, 2003; Min et al., 2013), but few studies have examined this relationship in the context of adults exposed to violence in childhood. The examination of the relationship between symptoms of psychopathology in adulthood and resilience in violence exposed samples is especially important given the high risk for psychopathology among this population (e.g., Chapman et al., 2004).

Given that this is a cross-sectional and retrospective study, it is important to keep in mind the alternative explanations for study findings, including that the recollection of young adults who are experiencing depressed mood may be tainted or inaccurate based on their current socio-emotional functioning. It could be that those individuals with more depressed mood are inaccurately portraying their past and current experiences. Such an array of explanations highlights the exploratory nature of these findings and the importance of future longitudinal research.

One of the most notable contributions from this study pertains to the protective factors that were associated with resilient functioning in emerging adults. After including in the final step of the regression model variables related to both risk and protection, only protective factors were related to resilience. More specifically, childhood violence, lifetime traumatic stress exposure, and symptoms of anxiety and depression were no longer significantly associated with resilience after including spirituality, emotional intelligence, and social support in the model. Further, all three protective factors were independently linked to resilience in young adults. Such findings suggest that the potency of protective factors outweighs that of adversity and psychopathology when predicting resilient functioning. The conceptualization of resilience along these more positive dimensions, rather than the absence of psychopathology alone, is in keeping with recent theoretical work (Bonanno, 2004; Masten, 2011), providing an important empirical validation of this scholarship.

By identifying variables that could enhance resilience, this study offers unique insight into how resilient functioning may be improved by both individual and environmental protective factors. For example, one of the most influential factors was emotional intelligence, which includes qualities such as understanding the origin of one's feelings, differentiating between emotions, and recognizing the influence that one's emotions may have on others. Such abilities are promoted in many cognitive and behavioral therapeutic techniques, including those specifically targeted at traumatic stress (Follette & Ruzek, 2006). These qualities of emotional intelligence could be cultivated through such treatment, which may result in improvements not only to psychopathology, but also to resiliency. Study findings also suggest that aspects of spirituality, such as a connection

to a higher power, finding strength and comfort in the divine, and feeling blessed are linked to enhanced resilience. The positive role of spirituality has been identified in previous research (Shaw et al., 2005) and this study highlights its link to resilience in emerging adults. This finding is especially influential because it suggests personal connection and a sense of ease through a higher power can promote resilient functioning; therefore connecting emerging adults with resources, groups, and organizations that might assist in facilitating spiritual practice and connectedness may be beneficial. Further, the emerging adult years can be a time of great uncertainty as individuals embark on their own paths separately from parental figures. It may be that spiritual connection to something greater than oneself offers a sense of stability and comfort during this potentially trying time, which may lead to enhanced resilient functioning.

The final protective factor associated with resilience after controlling for depression, anxiety and exposure to traumatic stressors was social support. In this study, the source of support was examined separately, with findings showing that support from friends, but not from family, was linked to enhanced resilience. This finding may highlight the unique experience of emerging adults who are transitioning out of the home environment and are less bound to parents. This age group is heavily influenced by peers, who may be seen more regularly and whose opinion may carry more weight than parental figures. For emerging adults who are solidifying important social bonds outside of the home, the relevance of friends to resilient functioning is exemplified in this study. The lack of a relationship between social support from family and resilient functioning may be due to the nature of the childhood violence, in that many of the victimization experiences occurred within the family environment (e.g., sibling violence, exposure to interparental conflict, sexual abuse by a family member, parental neglect). Participants who experienced significant trauma within the family system may perceive family members to be less compassionate, may rely less on family members during times of distress, and may engage in less contact with these individuals, all of which could impact social support.

Clinical and Policy Implications

A number of implications emerge based on the findings from this study. First, these results suggest that during the emerging adulthood years, clinical approaches should be targeted toward those individuals who seem most isolated, as connections to peers and connections to a higher power were both linked to more resilience. While college campuses should not necessarily promote spirituality, it is important for students to be made aware of the options on campus to exercise their spirituality and to connect with others who may also find support through spiritual practices. This information should be conveyed to students along with information on other, more general student organizations and groups that could serve as a source of support and connection. This focus on support and targeting those individuals who seem disengaged could be coupled with already in place efforts to address the mental health needs of individuals on college campuses. From a policy perspective, university administrators could develop educational materials for teachers and academic advisors about the signs of disengagement and what steps can be taken to connect students with support networks. In addition, a campus-wide policy could mandate that student health centers screen for histories of childhood violence and follow-up with those at highest risk. Next, efforts to identify young adults at risk for poor adjustment, or alternatively to identify those who are less likely to need intervention, may benefit from the use of assessment measures that address multiple domains of functioning beyond psychopathology, including emotional intelligence, sources of support, and spirituality. For example, measures that capture both individual strengths as well as areas of difficulty could provide key information to develop a comprehensive intervention plan. A final implication relates to the engagement of individuals who have experienced significant adversity during childhood. As these individuals transition into a new environment, such as college, they may benefit from psychoeducational materials that include information about specific signs and symptoms that might indicate a need for intervention, but also strategies that can be implemented to improve resilient functioning.

Limitations

A primary study limitation is the retrospective design, which could create bias and inaccuracy in participant's recall of previous experiences. Current life circumstances, recent stressors, and mental health struggles may have impacted how accurately participants remembered events from their childhood. Additionally, the cross-sectional nature of the study precludes causal inference and the ability to investigate potential variability in resilient functioning over time, including the expression of resilient functioning as children develop. Resilient functioning may not be stable over time and the factors associated with resilience at one point may be less beneficial at another. Given these caveats regarding causal inference, interpretations regarding the directionality of results is cautioned, as it cannot be determined whether the intrinsic and extrinsic factors noted in this study result from, rather than result in, resilient outcomes. These findings should therefore be considered exploratory, with the intention of serving as a useful guide for future research that can examine causal pathways. Next, the use of only self-report data introduces the potential for response bias, as participants may not have felt comfortable honestly responding to sensitive items, such as those related to violence during childhood. Such concerns were mitigated to some extent by anonymous online data collection in which participants never directly interacted with study staff. Last, the sample was relatively homogenous (e.g., most participants were Caucasian Americans, a majority were female) and it reflects the experiences of those emerging adults who chose to pursue a college education. This limits generalizability of

study findings to more diverse populations or to individuals in this developmental period who did not attend college. Such limitations reflect the preliminary nature of study findings and suggest future avenues for additional research.

Future Directions

Results of this study highlight four fruitful directions for further research. First, a systematic and longitudinal examination of poly-victimized children is needed to understand causal relations between variables identified in this study and to map out trajectories of maladaptive and resilient functioning following significant adversity. Second, assessing multiple informants beyond the victimized child, such as siblings, peers, and parents may provide important insight into the interpersonal dynamics that influence resilient functioning over time. Third, while this study underscores the benefits of assessing cumulative violence exposure, there is much to be learned from evaluations of the types of victimization that children endure, including how the severity and typology of one's victimization history influences current expressions of resilient functioning. Finally, assessing emerging adults as they transition into later adulthood and have children of their own would provide crucial data on the cycle of violence. It is also imperative that future research examine emerging adults who choose not to pursue higher education to determine if the same pattern of protective factors holds for young adults who are not students. Such studies can help shed much-needed light on differential trajectories of adjustment and the risk and protective patterns that influence individuals exposed to violence.

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