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## Correlates of Posttraumatic Growth in Adult Sexual Assault Victims

Sarah E. Ullman, Ph.D.

University of Illinois at Chicago

### Abstract

This exploratory study examined how demographics, child sexual abuse (CSA), assault-related factors, and post-assault responses predict posttraumatic growth in a diverse sample ( $N = 1863$ ) of female adult sexual assault victims. Multiple regression analysis showed that demographics (older age, ethnic minority race, less education) were all significantly related to greater posttraumatic growth, while CSA was unrelated to posttraumatic growth. Assault characteristics were weaker predictors of posttraumatic growth; whereas women's perception of life threat during the assault was related to greater posttraumatic growth. Post-assault factors including: greater levels of maladaptive coping, characterological self-blame, negative social reactions from others, and posttraumatic stress disorder (PTSD) symptoms were all related to less posttraumatic growth. Conversely, positive social reactions from others, perceived control over recovery, adaptive individual coping, and disrupted core beliefs were all related to greater posttraumatic growth. Clinicians should facilitate these modifiable social psychological factors when treating survivors.

### Keywords

correlates; sexual assault; posttraumatic growth; women; community sample

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Correlates of Posttraumatic Growth in Adult Sexual Assault Victims Researchers have identified numerous effects of adult sexual assault on women, including increased risk of PTSD, depression, sexual difficulties, and substance abuse problems (Campbell et al., 2009). Despite increased risk of problems among survivors, posttraumatic growth or positive life changes (Frazier, Conlon, & Glaser, 2001; Frazier, Tashiro, Berman, Steger, & Long (2004) are also commonly reported. Posttraumatic growth refers to positive psychological change experienced as a result of the struggle with highly challenging life circumstances (Tedeschi & Calhoun, 2004). Posttraumatic growth is a possible result of the cognitive effort to redefine beliefs shattered by trauma and to rebuild one's assumptions about oneself, others and the world (Calhoun & Tedeschi, 2006; Janoff-Bulman, 1992). In the process of rebuilding one's assumptive world, people reexamine many aspects of their lives and might recognize growth in areas like their personal strength, relationships with others, appreciation of life, spirituality, and new possibilities (Tedeschi & Calhoun, 1996).

Researchers have asserted that to best understand the range of impacts (both negative and positive) of adult sexual assault, the study of positive or resiliency outcomes is critically important, as growth may co-occur with at least some degree of PTSD symptoms in survivors of various traumatic events (Bonanno & Mancini, 2012). Whereas posttraumatic growth appears to show inconsistent associations with PTSD, including a positive relationship with a moderate level of symptoms (Kleim & Ehlers, 2009) in one recent longitudinal study, this does not mean that one causes the other, simply that trauma symptoms may coexist with other positive growth outcomes or that there are multiple trajectories within the traumatized populations (Bonanno & Mancini, 2012; Frazier et al., 2004). In trying to better understand risk and resiliency factors related to adjustment in adult sexual assault victims, one outcome in need of greater study is posttraumatic growth, given that studies have not yet examined the full range of possible correlates of posttraumatic growth in adult sexual assault victims.

In terms of the trajectory of posttraumatic growth, Frazier et al. (2001) studied 171 recent adult sexual assault survivors, most of whom reported positive change or growth 2 weeks postassault. Positive changes generally increased over time and negative changes decreased and positive changes were related to less distress whereas negative changes were more strongly related to greater distress. Women with positive life changes at 2 weeks and 12 months postassault had the least distress at 12 months. In hierarchical linear modeling analyses of the same data, Frazier et al. (2004) reported that social support, approach coping, religious coping and perceived control over recovery were related to positive life changes soon after assault and that increases in these same factors were related to increased positive life changes over time. She also found that the relations between social support and positive change were mediated by coping strategies and perceived control over the recovery. In another longitudinal study, Kleim & Ehlers (2009) studied 2 samples of physical assault survivors (2/3 male) and found a curvilinear relationship of PTSD and posttraumatic growth, such that survivors with no or greatest posttraumatic growth had the fewest symptoms and in one sample there was a curvilinear relation of depressive symptoms with posttraumatic growth. In one sample, non-White race, religiousness, peritraumatic fear, shame, and ruminative thinking at 2 weeks predicted growth 6 months later.

Other cross-sectional studies have examined correlates of posttraumatic growth in female victims. For example, Ahrens, Abeling, Ahmad, & Hinman (2010) studied 100 adult sexual assault victims who believed in God and found that positive religious coping was related to posttraumatic growth to a greater extent in Caucasian than African American survivors. Stump & Smith (2008) found in 50 homeless women with trauma histories that more current substance use was related to less posttraumatic growth. Cobb, Tedeschi, Calhoun, & Cann (2006) found that most intimate partner violence survivors reported posttraumatic growth, but that abuse and depression were unrelated to posttraumatic growth, whereas contact with another intimate partner violence survivor showing growth and having left an abusive relationship were each related to greater posttraumatic growth. Cole & Lynn (2010) studied 105 adult sexual assault victims and found 74% reported posttraumatic growth, but growth was not predictive of postassault symptoms and was negatively related to PTSD. Hardiness and acceptance coping were associated with greater posttraumatic growth. Grubaugh & Resick (2007) studied 100 female treatment seeking physical and sexual assault victims and

found most women reported some degree of growth, but neither depression nor PTSD were related to posttraumatic growth.

Various other factors known to be related to sexual assault recovery have yet to be studied in relationship to posttraumatic growth including: self-blame, positive and negative social reactions to assault disclosure, perceived life threat during assault, alcohol use prior to assault, and CSA histories (Ullman, 2010). Finally, while not yet examined in sexual assault victims, disrupted core beliefs are an important correlate of posttraumatic growth (Cann, Calhoun, & Tedeschi, & Solomon, 2010; Cann, Calhoun, Tedeschi, Kilmer et al., 2010) long theorized to be important to sexual assault survivors whose beliefs in self, others and the world can be shattered post-assault (Janoff-Bulman, 1992). For example, Lindstrom et al (2013) found that challenge to one's core beliefs was the biggest predictor of posttraumatic growth in a sample of college students with a stressful event in the past 2 years. Ben-Ezra et al (2010) reported that almost half of a sample of Jewish women's religious beliefs moved towards secularization following sexual assault, possibly due to their higher levels of psychiatric symptoms. Thus, studies of sexual assault and posttraumatic growth need to examine core belief disruption.

## Present Study

Because few studies have examined the role of multiple variable domains in relationship to posttraumatic growth, this study examined pre-assault, assault, and post-assault factors in relationship to posttraumatic growth in a large diverse sample of female sexual assault survivors recruited from the community. Past theory and research on posttraumatic growth in trauma survivors was used in selecting predictors and factors known to relate to PTSD in sexual assault survivors to see whether they also relate to posttraumatic growth.

Demographics were expected to relate to posttraumatic growth with older, more educated, ethnic minority women reporting more posttraumatic growth. Some evidence shows greater posttraumatic growth in women of color compared with Caucasian sexual assault survivors (Ahrens et al., 2010; Frazier et al., 2004; Kennedy, Davis, & Taylor, 1998). Given that older women may have more accumulated traumas as well as time for more posttraumatic growth to occur, it was expected more growth for older survivors, consistent other research on sexual and physical assault (Grubaugh & Resick, 2007) and CSA (McMillen, Zuravin, & Rideout, 1995). It was also expected a negative relationship of education and growth based on past work in sexual assault victims (Grubaugh & Resick, 2007) and low-SES, HIV+ women (Updegraff, Taylor, Kemeny et al., 2002).

CSA might relate to greater posttraumatic growth, based on some past research (McMillen et al., 1995; O'Dougherty-Wright, Crawford, & Sebastian, 2007). Assault characteristics of alcohol use and perceived life threat were hypothesized to relate to more posttraumatic growth, given past research showing subjective distress and alcohol use may both relate to growth (Kleim & Ehlers, 2009; Stump & Smith, 2008). Finally, adaptive forms of coping should relate to more posttraumatic growth, while maladaptive coping should relate to less posttraumatic growth. Perceived control over recovery was expected to relate to more posttraumatic growth as in past research (Frazier et al., 2004); whereas self-blame and PTSD were expected to relate to less posttraumatic growth (Frazier et al., 2001). Disrupted core

beliefs will relate to greater posttraumatic growth as theorized and shown in college student samples (Cann, Calhoun, Tedeschi, Kilmer et al., 2010; Cann, Calhoun, Tedeschi, & Solomon, 2010). Finally, negative social reactions to assault disclosure should relate to less posttraumatic growth, whereas positive reactions should relate to more posttraumatic growth, consistent with past work on social support and posttraumatic growth (Frazier et al., 2004; Helgeson & Lopez, 2010).

## Method

### Sample

A volunteer sample of women ( $N = 1863$ ) from the Chicagoland area, age ranging from 18 to 71 ( $M = 31.1$ ,  $SD = 12.2$ ) was recruited for a mail survey. The sample was ethnically diverse (45% African-American, 35% White, 2% Asian, 8.1% other; 14% Hispanic, assessed separately). The sample was well educated with 34.6% having a college degree or higher, 43.5% having some college education, and 21.9% having a high school education or less. Just under half of the sample (46.8%) was currently employed, although income levels were relatively low, with 68% of women having household incomes of less than \$30,000. The response rate was 85%. Recruitment was accomplished via weekly advertisements in local newspapers, on Craigslist, and through university mass mail. In addition, fliers were posted in the community, at other Chicago colleges and universities, as well as at agencies that cater to community members in general and victims of violence against women specifically (e.g., community centers, cultural centers, substance abuse clinics, domestic violence and rape crisis centers). Interested women called the research office and were screened for eligibility using the following criteria: a) had an unwanted sexual experience at the age of 14 or older, b) were 18 or older at the time of participation, and c) had previously told someone about their unwanted sexual experience. Eligible participants were mailed packets containing the survey, an informed consent sheet, a list of community resources for dealing with victimization, and a stamped return envelope for the completed survey. Participants were paid \$25 for their participation, as in past studies of this nature (Ullman, 2011). This is unlikely to have biased participation, as the survey is on a sensitive topic and took approximately an hour. Women in similar past studies said they did surveys on this topic: (a) to help other women, (b) as part of their recovery process, and (c) to do something about sexual assault (Ullman, 2010). The university's Institutional Review Board approved all study procedures and documents.

### Measures

**Sexual victimization** in childhood (before age 14) and adulthood (at age 14 or older) was assessed using a modified version of the Sexual Experiences Survey (SES, Koss, Gidycz, & Wisniewski 1987). The revised measure (Testa, VanZile-Tamsen, Livingston, & Koss, 2004) assesses various forms of sexual assault: unwanted sexual contact, verbally coerced intercourse, attempted rape, and rape resulting from force or incapacitation (e.g., from alcohol or drugs). The revised 11-item SES measure had good reliability ( $\alpha = .73$ ); similar reliability was found in our sample ( $\alpha = .78$ ). Most women had completed rapes (80%), so no sexual assault severity predictor was included. *CSA severity* was assessed with responses to the SES prior to age 14 on a 5-level ordinal scale ranging from fondling/kissing through

completed rape ( $M = 1.88$ ,  $SD = 1.72$ ,  $\alpha = .89$ ), as this trauma affects sexual assault victims' psychological and substance use outcomes (Ullman, Filipas, Townsend, & Starzynski, 2005). Years since assault was highly correlated with age, so only current age was included in the regression, however both variables were correlated with less PTSD and more posttraumatic growth. *Perceived life threat* was assessed with the question, "Did you think your life was in danger?" with respect to adult sexual assault (57.5% said yes). Perpetrator violence during assault was dropped from the final model, as it was highly correlated with perceived life threat and nonsignificant. *Victim pre-assault drinking* was assessed with a question: "Were you using any intoxicants on this occasion?" (30.8% said yes).

**Coping strategies**—Maladaptive coping strategies are cognitive and behavioral strategies that alleviate distress without actually addressing the source of distress itself. These strategies can include cognitive disengagement (e.g., blocking out thoughts), behavioral disengagement (e.g., social withdrawal), denial, and/or use of substances to cope. These strategies are commonly used to deal with distress related to childhood abuse and/or adult sexual assault and can contribute to psychological symptoms of PTSD (Littleton, Horseley, & Nelson, 2007). In this study, *maladaptive coping* was the average of 4-point Likert scale ("not at all" to "did this a lot" in the past 12 months) responses to 8 items (behavioral disengagement, denial, self-blame, substance use; see Carver, 1997 for items). The measure was reliable ( $\alpha = .81$ ;  $M = 16.35$ ,  $SD = 5.78$ ). In past research, approach and/or adaptive forms of coping had weaker relationships with PTSD (Littleton et al., 2007; Ullman et al., 2007), so it was disaggregated into: *adaptive individual coping* (12 items assessing adaptive, active forms of individual coping;  $M = 29.19$ ,  $SD = 7.81$ ,  $\alpha = .83$ ) such as: "I thought hard about what steps to take." and *adaptive social coping* (4 items assessing active adaptive interpersonal forms of coping;  $M = 9.07$ ,  $SD = 3.72$ ,  $\alpha = .87$ ) such as: "I tried to get advice or help from other people about what to do."

**Cognitive responses**—*Perceived control over recovery* from assault was assessed using seven items from the Rape Attribution Questionnaire (RAQ) to assess present control (Frazier, 2003). Women were asked specifically to rate their perceptions of control over recovery from their sexual assault in the past year on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $M = 3.71$ ,  $SD = .71$ ). Frazier (2003) reported an average alpha of .75 for present control over recovery from assault across four time periods in one year. The scale was reliable here also (Cronbach's  $\alpha = .70$ ;  $M = 3.60$ ;  $SD = .78$ ). *Character self-blame* was assessed with the RAQ (Frazier, 2003); a valid and reliable self-report measure of sexual assault victims' attributions about why the assault occurred. A 5-item scale assessed characterological (e.g., "I am unlucky") self-blame. Participants rated how often they thought they were assaulted during the past year using 5-point scales from 1 (strongly disagree) to 5 (strongly agree). Frazier reported subscale alpha coefficients (.77-.89) and test-retest reliability (.68-.80) in sexual assault victims. The measure had acceptable reliability in this sample ( $\alpha = .76$ ;  $M = 2.56$ ,  $SD = .96$ ). *Disrupted core beliefs* were assessed with the Core Beliefs Inventory (CBI; Cann, Calhoun, Tedeschi, Taku, Vishnevsky et al., 2010), a 9-item inventory assessing the extent to which a specific event leads people to examine core assumptions about their world using 6-point scales from 0 (not at all) to 5 (to a very great degree), and scores are reported as mean of the 9 items. This scale has been found

to have good internal reliability, with Cronbach's alphas ranging from .82 to .90 across three studies (Cann, Calhoun, Tedeschi, Taku, Vishnevsky et al., 2010) and a test-retest reliability across 2 months of .69 (Cann, Calhoun, Tedeschi, Kilmer et al., 2010). Present sample descriptives were:  $M = 3.17$ ,  $SD = 1.23$ ;  $\alpha = .90$ ).

**Social reactions**—Victims completed the Social Reactions Questionnaire (SRQ; Ullman, 2000) reporting how often they received 48 different social reactions from any person since the assault on a scale ranging from 0 (*never*) to 4 (*always*). The SRQ has good test-retest reliability ( $r_s = .68$  to  $.77$ ) and evidence of several forms of validity Ullman (2000). A composite variable of *positive social reactions* was computed (e.g., emotionally or informationally supportive reactions such as “Held you or told you that you are loved” or “Helped you get information of any kind about coping with the experience”). Descriptives were:  $M = 2.22$ ,  $SD = .95$ ,  $\alpha = .92$ . Two subtypes of negative reactions identified in prior psychometric analyses (Relyea & Ullman, 2012) were analyzed: *Turning against* are reactions that have been found reliably harmful, such as blaming or stigmatizing, appear to overtly attack the survivor. Descriptives were:  $M = .82$ ,  $SD = .93$ ,  $\alpha = .92$ . *Unsupportive acknowledgement* includes reactions that survivors list as both helpful and hurtful (controlling, distracting, or egocentric) appear to have a positive aspect of acknowledging the assault as well as a negative aspect of not explicitly providing emotional or tangible support. Despite not being as overtly negative, such reactions may have negative consequences. Descriptives were:  $M = 1.11$ ,  $SD = .84$ ,  $\alpha = .85$ .

**Posttraumatic stress symptoms** were assessed with the Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995), a standardized 17-item instrument based on DSM-IV criteria. On a scale ranging from 0 (not at all) to 3 (almost always), women rated how often each symptom (i.e., reexperiencing/intrusion, avoidance/numbing, hyperarousal) bothered them in relation to assault during the past year. The PDS has acceptable test-retest reliability for a PTSD diagnosis in assault survivors over 2 weeks ( $\kappa = .74$ ; Foa, Cashman, Jaycox, & Perry, 1997). The 17 items were summed to assess extent of posttraumatic symptoms ( $M = 20.75$ ,  $SD = 12.76$ ,  $\alpha = .93$ ).

**Posttraumatic growth** was assessed with Cann, Calhoun, Tedeschi, & Taku et al's (2010) 10-item short form of the post traumatic growth inventory (PTGI-SF), a self-report instrument for assessing psychological growth following a traumatic event. It has internal reliability only slightly lower than the full PTGI, of around .90 across various samples (Cann, Calhoun, Tedeschi, Taku et al., 2010). Descriptives for the total score here were as follows: ( $M = 2.16$ ,  $SD = 1.10$ ,  $\alpha = .92$ ).

## Results

A hierarchical regression analysis was run of various correlates with the composite posttraumatic growth score as the dependent variable. Variables were entered in 3 consecutive blocks: Block 1: demographics (age, race, and education), Block 2: CSA, pre-assault drinking, life threat, Block 3: coping, control, self-blame, core beliefs, social reactions, PTSD (see Table 1). As expected, demographics were associated with posttraumatic growth, accounting for 15% of the variance. Older women and ethnic minority

women reported greater posttraumatic growth, whereas education was related to less posttraumatic growth. In Block 2, CSA, life threat associated with the sexual assault, and pre-assault drinking were entered. CSA was not significant, whereas life threat was related to greater posttraumatic growth and pre-assault drinking was related to less posttraumatic growth, as expected. This block accounted for 17% of the variance, thus only 2% more variance beyond block 1. In Block 3, post-assault factors of coping, control, self-blame, core beliefs, social reactions, and PTSD were entered, which led to a total of 40% of the variance accounted for in posttraumatic growth. After adding these variables, only pre-assault drinking became nonsignificant, but all other factors entered in the first 2 Blocks remained significant. As expected, maladaptive coping was related to less posttraumatic growth, whereas adaptive social coping was nonsignificant and adaptive individual coping was related to greater posttraumatic growth. As expected, perceived control over recovery was related to greater posttraumatic growth, whereas greater self-blame was related to less posttraumatic growth. As expected, greater questioning of one's core beliefs was related to greater posttraumatic growth. Finally, positive social reactions were related to greater posttraumatic growth, acknowledgement without support reactions were unrelated to posttraumatic growth and turning against reactions were related to less posttraumatic growth.

## Discussion

The present study builds on and extends past research by examining the role of a broader range of correlates of posttraumatic growth than have been studied in the past in a larger, diverse sample of diverse female sexual assault victims. The finding of greater posttraumatic growth in women of color is consistent with past research on sexual assault and posttraumatic growth in other studies (Ahrens et al., 2010; Frazier et al., 2004; Kennedy et al., 1998). Like one past study of female victims (Grubaugh & Resick), our findings showed greater age and less education associated with greater posttraumatic growth. Given the significance of these demographics in all three steps (accounting for 15% of variance), it is important to further examine demographics in relationship to posttraumatic growth in sexual assault victims. Older women may have more time to have processed their assaults and experienced growth. Future research should explore why less educated women and women of color report greater growth, as perhaps they have different trauma histories or coping responses associated with better growth, such as religious coping (Ahrens et al., 2010; FalLOT & Heckman, 2005) or acceptance coping (Cole & Lynn, 2010).

Surprisingly, CSA was not related to greater posttraumatic growth in the regression, even though some research shows a relationship of such traumas to greater posttraumatic growth (McMillen et al., 1995), but this may be because our sample is a more selective sample of all adult sexual assault victims. As expected, perceived life threat during the assault was related to more posttraumatic growth, consistent with research showing that subjective distress is important to posttraumatic growth (Frazier et al., 2004). Alcohol use prior to assault was related to less posttraumatic growth, consistent with a study of homeless women (Stump & Smith, 2008). This finding should be replicated in future studies of victims and explanatory factors explored, such as self-blame, self-medication of distress, and/or greater problem drinking all of which may interfere with posttraumatic growth.

Finally, maladaptive coping was related to less posttraumatic growth, also consistent with past research showing that negative forms of coping like avoidance relate to less posttraumatic growth (Kennedy et al., 1998; Frazier et al., 2004). Building on Frazier et al.'s (2004) work, adaptive social coping was unrelated to posttraumatic growth but adaptive individual coping was related to greater posttraumatic growth. Perhaps one's individual efforts are more closely linked to perceived growth and/or posttraumatic growth does not adequately assess the interpersonal facets of growth, as suggested by Helgeson & Lopez (2010), who showed that "received growth support" may be important to assess directly to understand how the social environment contributes to growth following adversity. As expected, positive social reactions were related to greater posttraumatic growth, whereas acknowledgement without support was unrelated to growth and turning against reactions were related to less posttraumatic growth. This extends and supports research showing the importance of social support to posttraumatic growth (Frazier et al., 2004; Helgeson & Lopez, 2010), by showing that supportive and unsupportive reactions to assault disclosure also relate to posttraumatic growth. In particular, negative social reactions received after disclosing assault may lead to less posttraumatic growth, extending past research showing harmful effects of such reactions on self-blame, avoidance coping, and PTSD (Ullman, 2010). Future longitudinal research is needed to examine the directionality of relationships of social reactions to assault disclosure, coping strategies, and posttraumatic growth in female victims.

Perceived control over recovery was related to greater posttraumatic growth as in Frazier et al.'s (2004) study. Self-blame was related to less posttraumatic growth, building on past research showing that such responses are associated with greater PTSD in sexual assault victims (Frazier, 2003). Disruption of core beliefs was related to greater posttraumatic growth as in other research on posttraumatic growth generally (Lindstrom et al., 2013), suggesting that having one's beliefs challenged following victimization may result in greater growth. Finally, PTSD was related to less posttraumatic growth, consistent with past studies of sexual assault (Cole & Lynn, 2010; Frazier et al., 2001), indicating that more symptomatic victims may experience less growth. These findings suggest that clinicians can help victims by supporting their efforts to regain control of their recovery after assault, reinforce they are not to blame for what happened, help them to cognitively process the assault and its meaning, and support them in adaptive coping efforts, and seeking help from supportive individuals in their social networks and/or from support groups in the community as needed.

This is the first study to examine a broad range of correlates of posttraumatic growth in a large diverse sample of sexual assault victims. This study is limited in being a cross-sectional, retrospective design. This makes it difficult to know whether the findings will generalize to survivors in the broader population and the directionality of associations of variables studied in relationship to posttraumatic growth. Despite this, the data show that many factors may relate to posttraumatic growth in this population and should be examined further in representative samples of sexual assault victims. Both individual demographic, assault-related factors, perceived life threat, cognitive (control, coping, core beliefs) and contextual factors (social reactions), and PTSD are important to sexually assaulted women's self-reported posttraumatic growth. Surprisingly, CSA was not related to posttraumatic



growth and alcohol use prior to assault was related to less posttraumatic growth but only prior to entering other post-assault psychosocial factors in the model. These findings add new clinically useful information about correlates of posttraumatic growth not yet studied in sexual assault victims and contribute to the small number of studies of sexual assault and posttraumatic growth. Future longitudinal data currently being collected in this sample of victims can help to understand directionality of these effects and to further test theoretical models of posttraumatic growth needed to better understand these positive outcomes of sexual assault. Given the heterogeneity of sexual assault victims and variability in recovery outcomes, trajectories of recovery from both negative outcomes like PTSD and positive outcomes such as posttraumatic growth need further study to better understand resilience and recovery in this population (Bonanno & Mancini, 2012).

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**Table 1**

## Hierarchical Regression Model Predicting Posttraumatic Growth

| Predictor                  | B    | b    | SE  | p    |
|----------------------------|------|------|-----|------|
| Step 1                     |      |      |     |      |
| Age                        | .01  | .15  | .00 | .000 |
| Race                       | -.69 | -.31 | .06 | .000 |
| Education                  | -.14 | -.12 | .04 | .000 |
| Step 2                     |      |      |     |      |
| Age                        | .01  | .13  | .00 | .000 |
| Race                       | -.57 | -.28 | .07 | .000 |
| Education                  | -.09 | -.11 | .04 | .000 |
| CSA                        | .02  | .05  | .02 | .117 |
| Alcohol SA                 | -.19 | -.10 | .07 | .003 |
| Life threat                | .27  | .12  | .07 | .000 |
| Step 3                     |      |      |     |      |
| Age                        | .01  | .08  | .00 | .001 |
| Race                       | -.45 | -.21 | .06 | .000 |
| Education                  | -.13 | -.11 | .03 | .000 |
| CSA                        | .02  | .03  | .02 | .313 |
| Alcohol SA                 | -.09 | -.04 | .06 | .153 |
| Life threat                | .23  | .11  | .06 | .000 |
| Maladaptive coping         | -.02 | -.11 | .01 | .001 |
| Adaptive social coping     | -.03 | -.06 | .01 | .133 |
| Adaptive individual coping | .04  | .32  | .01 | .000 |
| Perceived control          | .21  | .15  | .04 | .000 |
| Character self-blame       | -.07 | -.06 | .03 | .039 |
| Core beliefs               | .15  | .17  | .02 | .000 |
| Acknowledge w/o support    | .05  | .04  | .05 | .347 |
| Turning against reactions  | -.09 | -.07 | .04 | .036 |
| Good reactions             | .15  | .13  | .04 | .000 |
| PTSD                       | -.01 | -.08 | .00 | .022 |

Note: Coefficients for each step of the model shown. Step 1:  $F(3, 1077) = 66.04, p = .000, \text{Adjusted } R^2 = .15$ ; Step 2:  $F(6, 1074) = 38.84, p = .000, \text{Adjusted } R^2 = .17$ ; Step 3:  $F(16, 1064) = 41.64, p = .000, \text{Adjusted } R^2 = .40$ .