



Published in final edited form as:

J Am Coll Health. 2019 ; 67(2): 123–131. doi:10.1080/07448481.2018.1462824.

Prevalence and predictors of PTSD among a college sample

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Exposure to potentially traumatic events (PTEs) is common among young adults. Notably, rates of trauma exposure have been shown to peak sharply between 16 and 20 years, which overlaps with the ages of the average college population.¹ This highlights the importance of studying PTE exposure in college students, as estimates in this population have been as high as 84%.^{2,3} Furthermore, among PTE exposed college students, the prevalence of posttraumatic stress disorder (PTSD) is estimated to be 9%.⁴ Thus, although a meaningful number of students develop PTSD, the majority of those exposed to PTEs do not, which is congruent with studies of the general population.^{5,6,7} However, PTSD is a debilitating disorder and has also been associated with comorbid psychiatric disorders⁸, school drop out⁹, and negative health outcomes.¹⁰ Given these identified associations, understanding both the correlates of PTE and PTSD and the prospective relationships between PTSD and mental health outcomes that may exist in college students is crucial.

Existing research has identified a number of factors associated with risk for PTSD. A meta-analysis of risk factors predicting PTSD in civilians found that demographic characteristics (e.g., sex, younger age, race/ethnicity) and early environmental conditions (e.g., trauma type or severity) act as significant risk factors for the development of PTSD after PTE exposure.¹¹ Consistent sex differences have been identified where females possess greater risk for developing PTSD symptoms upon exposure to PTEs¹², but males possess greater risk for PTE exposure than women.¹ There also seems to be an age effect on risk for PTE exposure and PTSD development, whereby individuals in late adolescence/early adulthood (i.e., 16-25 year-olds) are at greatest risk for PTE exposure and development of PTSD symptoms.¹ Lastly, race and ethnicity seem to impact risk and development, wherein the lifetime prevalence of PTSD is reported to be highest in those who identify as African Americans, intermediate in those who identify as White or Hispanic, and lowest in those who identify as Asian.¹³ Considering the existent research, demographics (e.g., age, sex, etc.) are important to consider when examining outcomes post-PTE exposure.

Psychosocial and environmental factors have also been associated with likelihood of PTSD. Mental health conditions (e.g., depression, anxiety), a family history of psychopathology, and perceived life threat during the trauma have been consistently shown to increase risk for PTSD.⁷ Additionally, trauma type has been shown to impact the development of the

disorder, where certain trauma types have a larger impact on the conditional probability of PTSD. More specifically, many studies have found that interpersonal trauma exposure (e.g., sexual assault, physical assault, etc.) increases the risk for PTSD.^{8,14,15} Thus, it is important to consider psychosocial and environmental variables in addition to non-modifiable variables, such as demographic factors, on risk for PTSD for a more complete etiologic understanding of risk. Identifying these factors may help to develop better prevention and intervention strategies that can be implemented on college campuses.

Efforts to identify variables associated with increased risk for PTSD in college students are important because beyond greater exposure to PTEs themselves, trauma-exposed college students are at an increased risk for adverse outcomes.¹⁶ Among students who then develop PTSD, rates of impulse control, goal-directed behavior, academic success, alcohol misuse, and general negative coping styles are higher.^{16,17,43} Specifically, early college trauma exposure may impact levels of non-traumatic academic stress, impacting academic performance and other stress related symptoms.¹⁶ Given that students who then develop PTSD demonstrate a higher risk for more problematic substance misuse than their non-PTSD counterparts, it is likely that increased alcohol use may be an effort to cope with these stress related symptoms.^{16, 18} PTSD is also associated with increased rates of psychiatric comorbidity, such as depression, substance use disorders, anxiety disorders, and suicidal ideation.^{19,20,21} The use of longitudinal data to further examine these relationships will contribute to a more comprehensive understanding of how PTE exposure and PTSD development may influence future outcomes, specifically in college aged individuals.

With these points in mind, the first aim of the present study was to determine the prevalence of PTEs and probable PTSD among incoming freshman enrolled in a university-wide longitudinal study. Based on prior literature, we hypothesized that females would be more likely to endorse probable PTSD upon exposure to at least one PTE, and would endorse higher rates of interpersonal PTE exposure. Furthering this aim, we sought to examine the correlates of probable PTSD symptoms reported at college entry (freshman year, fall). We hypothesized that sex, peer deviance, neuroticism, anxiety, depression, alcohol use, and interpersonal PTE exposure would be associated with higher PTSD symptoms. The second aim of the study was to examine the prospective relations between PTSD symptoms reported at college entry and psychosocial variables at the spring follow-up assessment. We hypothesized that PTSD symptoms would prospectively predict self-reported anxiety, depression, alcohol use, social support, and PTEs measured at follow-up (freshman year, spring).

Methods

Participants

Participants were part of a larger study, Spit for Science (S4S), a university-wide study which aims to better understand the development of substance use and emotional health outcomes in college students through broad-based genetic, environmental, and phenotypic assessments.²⁴ Freshman college students begin participation upon arrival on campus, and are followed longitudinally across their college years. More details on recruitment can be found elsewhere²⁴, but briefly, each year all incoming freshmen aged 18 years are invited

to participate in a university-wide research study on behavioral health in college students. At the time of this study, data had been collected for four cohorts between 2011 and 2014. Cohorts are classified based on the year they enter school. Every cohort is assessed twice in their freshman year (fall and spring) and then every spring thereafter. Data from the fall (August) freshman year can be considered baseline data.

The current study includes data from the two freshmen time points - baseline (fall) and follow-up (spring) from the fourth cohort ($N = 2310$, $N = 1263$, respectively; $M_{age} = 18.5$, $SD = .39$; 62.2% female; White = 50.2%; African American/Black = 17.8%; Asian = 17.3%; other = 14.7%). Because the fourth cohort was the first to given the four-item PTSD screener, the current study only examined this cohort. The sex and race/ethnicity of participants was representative of the broader student population. Race/ethnicity was dummy-coded and separated into three categories with White set as the reference group. Attrition was not related to most key study variables, however, women (54.9%) were more likely to complete the follow-up survey than were men (45.1%; $X^2 = 8.12$, $p = .004$). The VCU Institutional Review Board (IRB) approved all study procedures and informed consent was obtained from all study participants.

Measures

PTE Exposure (Fall and Spring)—PTE exposure was assessed using an abbreviated version of the Life Events Checklist.²⁵ Participants were asked to report on the occurrence of five different potentially traumatic events: natural disasters, physical assaults, sexual assaults, other unwanted or uncomfortable sexual experiences, and transportation accidents. Response options were “yes” or “no” to items regarding whether each stressful event occurred “before the past 12 months”, “during the past 12 months”, “before starting VCU” or “never happened to me”. To assess for PTE at follow up, PTE items endorsed as occurring “since VCU” were used. Items were summed to yield a ‘cumulative PTE’ score that encompassed number of lifetime PTE categories occurring prior to college entrance. Categories were further grouped by interpersonal (i.e., physical assaults, sexual assaults, other unwanted or uncomfortable sexual experiences) and accidental (i.e., natural disasters and transportation accidents) PTEs.

Probable PTSD (Fall)—If a participant endorsed a PTE on the Life Events Checklist (Gray et al., 2004) or endorsed at least one item derived from an additional stressful events measure¹⁰ they were prompted to respond to four PTSD screener items (four items; $\alpha = .83$). The PTSD screener items were derived from the Primary Care PTSD Screen (PC-PTSD), previously used in screening PTSD symptoms in primary care settings.²⁶ The four items ask whether the participant have ever experienced: nightmares, attempts to avoid thoughts or reminders of the potentially traumatic experience, hypervigilance, and feelings of detachment. The total symptom count (ranging from 0-4) was used as the primary PTSD variable in analyses, and based on standardized scoring for this measure; endorsement of three or more items was used as indication of a positive lifetime history of probable PTSD.

Stressful Life Events (Fall)—A total stressful life events (SLE) count, at baseline, was computed by assessing for the occurrence of events that are potentially stressful, yet not

traumatic. Participants endorsed whether an event had occurred over the last 12 months with a “yes” or “no” response option. SLEs assessed for included: broken engagement or steady relationship, serious illness or injury, trouble with the police, laid off or fired from a job, etc. A sum score, with a possible range from 0 to 12, was created by adding the responses from each participant with “yes” coded as 1 and “no” coded as 0.

Peer Deviance (Fall)—Peer deviance was measured by six items originally created to assess conduct disorder and peer deviance.²⁷ Items asked how many friends the participant regularly interacted with exhibited potentially deviant behaviors within the past year (e.g., smoked cigarettes, been in trouble with the law). Responses were scored on a 5-point Likert-type scale from 1 (none) to 5 (all) with higher scores indicating higher levels of deviance among peers ($\alpha = .89$).

Personality (Fall)—A modified version of the Big Five Inventory measured personality characteristics.²⁸ The scale includes five 3-item sub-scales consisting of Extraversion ($\alpha = .80$), Agreeableness ($\alpha = .60$), Conscientiousness ($\alpha = .71$), Neuroticism ($\alpha = .70$) and Openness ($\alpha = .64$). Prior research provides evidence for a relationship between neuroticism and PTE exposure; the other subscales were also analyzed to determine if additional relationships were present.

Social Support (Spring)—Current social support was evaluated via three items from the modified version of the Medical Outcomes Study module.²⁹ Responses were made on a Likert-type scale of 1 (none of the time) to 4 (all of the time) and summed ($\alpha = .84$), with higher scores representing greater perceived social support.

Depressive and Anxiety Symptoms (Fall and Spring)—The Symptom Checklist-90 Short Version³⁰ is an instrument used to measure mental health status. An abbreviated SCL was used in the present study to assess depression (four items; $\alpha = .80$) and anxiety (four items; $\alpha = .82$) over the past month. Responses were made on a Likert-type scale of 1 (not at all) to 5 (extremely). The same measure was used to assess depression (four items; $\alpha = .86$) and anxiety (four items; $\alpha = .84$) at follow up.

Alcohol Use (Fall and Spring)—At each assessment, participants responded to a question assessing if the participant had ever had at least one drink of alcohol in their lifetime. Additionally, two items measured current alcohol use: average alcohol use frequency and quantity during the past 30 days. Alcohol use frequency was assessed on a 5-point scale ranging from 1 (never) to 5 (four or more times a week). Alcohol use quantity was defined as the average number of standard drinks consumed on a typical drinking day and was assessed on a 6-point scale, ranging from 1 (none) to 6 (10 or more drinks).

Analyses

All scale variables were examined for distribution properties. Transformations were completed as needed. Descriptive statistics were conducted to determine the prevalence of each type of PTE and probable PTSD within the full sample and by sex (Aim 1). For Aim 1, determining factors associated with probable PTSD, preliminary regression models grouped

by construct (i.e., demographics, personality, etc.) were conducted to identify variables within each set that were associated with PTSD symptoms at baseline (Fall). All significant variables were then added to a comprehensive model to identify which factors were associated with PTSD symptoms. To examine the prospective relations between PTSD symptoms at baseline on later psychosocial outcomes in Aim 2, correlation analyses were first conducted to screen variables for relation to PTSD symptoms to be included as dependent variables in the regression analyses. Separate regression analyses were then conducted to determine if PTSD symptoms at baseline (Fall) prospectively predicted the dependent variables at follow-up (Spring), above and beyond the covariates (i.e., sex, baseline level the dependent variable).

Results

Descriptives

Seventy percent ($n = 1,186$) of individuals participating in the study reported experiencing at least one PTE event within their lifetime. After further examination, 66.2% of the full sample reported experiencing at least one accidental PTE, while 33.1% reported experiencing at least one interpersonal PTE. Men and women did not significantly differ on endorsement of accidental PTE ($X^2 = .15, p = .70$) (see Table 1). However, males and females did significantly differ on endorsement of interpersonal PTE ($X^2 = 25.5, p < .001$), with women being more likely to endorse interpersonal PTE than men (37.3% vs. 25.4%, respectively). Among those exposed to any form of PTE, 34.4% endorsed probable PTSD symptoms, as measured by endorsing three or more symptoms on the PC-PTSD screener. A significantly larger percentage of females (32.6%) than males (11.4%) met criteria for probable PTSD ($X^2 = 66.11, p < .001$).

Aim 1: Factors Associated with Probable PTSD at baseline

As shown in Table 2, female sex was associated with higher PTSD symptoms. Among the personality variables only higher neuroticism was associated with greater PTSD symptoms. Higher peer deviance levels were associated with greater PTSD symptoms. Among the psychopathology variables, both greater depressive and anxiety symptoms were associated with greater PTSD symptoms. Lastly, a higher number of stressful life events and interpersonal trauma PTE were associated with greater PTSD symptoms. Once all significant predictors from the individual regressions were added into the final model, only sex, depressive symptoms, anxiety symptoms, and interpersonal PTE count remained significantly associated with baseline PTSD symptoms (see Table 2).

Aim 2: Factors predicted by Probable PTSD at baseline

Accidental PTE, social support, alcohol frequency, and alcohol use were not significantly correlated with PTSD symptoms at baseline and thus, were not entered into the regression model (see Table 3). Interpersonal PTE, depressive symptoms, and anxiety symptoms measured at follow up were all significantly correlated with PTSD symptoms at baseline. Thus, three regressions were conducted. As shown in Table 4, controlling for key covariates (i.e., sex, baseline levels of each construct respectively), PTSD symptoms at baseline were positively associated with higher anxiety symptoms and depressive symptoms levels at

follow up. PTSD symptoms at baseline also significantly predicted interpersonal PTE at follow up, where higher PTSD symptoms predicted higher interpersonal PTE exposure (see Table 4).

Comments

The current study sought to broaden our understanding of PTEs and probable PTSD in young adults. In a sample of first-year college students, we examined the prevalence of PTE exposure and probable PTSD, correlates of probable PTSD, and the prospective relations between probable PTSD at college entry and mental health outcomes in the spring term (approximately 6 months later). In line with previous epidemiological studies^{3,4,31}, prevalence of lifetime PTEs was high (more than half the sample), and around a third of the sample endorsed PTSD symptoms on the screener at a level indicative of probable PTSD. However, females reported exposure to more types of interpersonal PTEs and PTSD symptoms as compared to males, consistent with findings from existing literature.^{14,32,33} At the start of freshman year of college (i.e., Fall baseline), the correlates of probable PTSD were female sex, endorsing depressive symptomology, interpersonal trauma exposure, and total number of SLEs. After controlling for baseline levels of relevant correlates, baseline PTSD symptoms predicted higher depression and anxiety symptoms as well as additional interpersonal PTEs experienced during the freshman year. Taken together, such results highlight the importance of examining PTSD across development due to its cyclical and complex relationship with common mental health symptomatology³⁴ and continued trauma exposure.³⁵ Specifically, programming and support for college students with previous PTE risk and subsequent PTSD development should be of the utmost priority.

The present findings align with the extant literature on PTSD in college age individuals¹ and samples of college students.^{3,4} Current prevalence rates of PTE exposure and PTSD align with past studies of college students.^{3,4,31,36} The findings also align with trends previously noted for PTE exposure and PTSD among females³², where the prevalence of PTSD in females is greater than that of males.^{8,12,15,37} However, a recent study found that the effect of sex diminishes when other risk factors (e.g., pre-existing disorders, family history, personality features, coping strategies) are taken into consideration.¹² The current finding that being female is a significant correlate of probable PTSD after controlling for several other risk factors in young adults adds to our understanding of sex differences in risk and the growing literature on risk of PTSD in this age group.³⁶

Findings that depressive symptoms, interpersonal trauma, and total SLEs were associated with probable PTSD at the start of college align with previous reports from both adolescent and adult samples. Specifically, research on disorders comorbid with PTSD has shown that among youth with major depression, rates of comorbid PTSD range from 24-32%.⁸ In adults, major depression is also predictive of PTSD even after controlling for multiple other risk factors.¹² The findings of the current study align with the findings from extant research³⁶, albeit using a new cohort of students and a stronger PTSD measure, showing that interpersonal PTEs are associated with increased risk of trauma-related distress in college students compared to accidental trauma. Not only does the current study show the increased risk that comes with interpersonal PTE, but also shows that in this age group, interpersonal

trauma and total SLEs predict probable PTSD. This indicates a particularly vulnerable group in regard to risk for PTSD development and possibly more severe symptom presentation. Increasing outreach and treatment efforts for those endorsing interpersonal PTE (e.g., educating on how to cope with SLEs) is important. Furthermore, depressive symptoms are also predictive of PTSD, highlighting the vulnerability of students with this symptom presentation.

Unexpectedly, neuroticism only had a univariate relationship with probable PTSD and was not significant in the final model. Past literature has found that neuroticism is predictive of all PTEs (including interpersonal) in college-age young adults³⁶ and PTSD in adults.¹² The latter study also included multiple risk factors in the analysis¹², similar to the current study design. Hence, examining personality constructs in college-age adults needs to be more thoroughly examined in future studies.

The impact of probable PTSD at the spring semester follow-up adds to the growing literature of the course and consequences of PTSD.^{38,39,40} These findings point to notable clinical and programmatic implications. For example, intervention efforts may target PTSD symptomology in order to reduce or inhibit the later development of anxiety and depressive symptoms. While it has been demonstrated that PTSD is associated with a number of long-term functional and mental health outcomes, the current study expands the literature given that it is longitudinal in nature. Previous longitudinal examinations of PTSD support the current findings, showing that PTSD predicted both depression and anxiety at a second time point.²³ Although the longitudinal effects of PTSD on mental health outcomes have been examined²², there is less research examining the impact of PTSD development on new-onset interpersonal PTE. The findings from the current study support PTSD as a risk factor for new-onset interpersonal PTE. Thus, intervention efforts focused on PTSD symptoms may help to reduce new onset interpersonal PTE in college-age adults.

Present study findings of PTSD in the beginning of freshman year predicting anxiety and depression at the end of the year could be due to phenotypic associations between PTSD symptoms and internalizing disorders or represent a progression of PTSD symptomatology if left untreated. For example, a student entering college with probable PTSD, which depression and related trauma contributed to initially, may become further isolated and withdrawn. This in turn escalates depressive symptoms over time above and beyond baseline severity. Other possible mechanisms to explain this bi-directional relationship between PTSD and its correlates are the shared genetic link between PTSD and internalizing symptoms.^{41,42} Nevertheless, a major strength of the current study is its ability to detect novel trauma exposure and internalizing symptoms related to PTSD above baseline levels

Although the present findings are largely consistent with past literature, the study helps fill a gap in the literature given its focus on first-year college students, a particularly vulnerable population that has received limited research focus. It is hoped that research efforts increase with regard to examining and better understanding PTE, probable PTSD, and concurrent PTSD across development. Accordingly, implications for on-campus services are notable. Specifically, it is possible that if students are screened and seek treatment when they enter college for probable PTSD and/or related symptomologies, later depression and anxiety may

be reduced, as well as the impact of new trauma on factors such as negative health outcomes, academic success, and other psychosocial outcomes.^{9,43,44} Outreach programming efforts for those with interpersonal trauma could provide additional contact for those with these additional risks. Given the high prevalence of traumatic events and symptoms reported associated with exposure in our study, it is imperative that the college and university systems are aware of the extent to the problem in order to adequately prepare and allocate resources. Resources, including qualified staff and trauma-informed training, are needed, and university budgets may need to be adapted to allow for this. Additionally, future studies could examine the implementation of technological screening measures (e.g., web-based surveys that are automatically scored and associated with tailored feedback, including options that allow for the data to be sent to a qualified health professional at campus resource centers for follow-up) in comparison to in-person screening.

Stigma associated with mental health issues continues to be a problem, and may impact student engagement in mental health services. Recent societal movements, such as the #MeToo movement may be changing the sociopolitical landscape with important implications for students feeling more empowered to come forward with their trauma histories, however, this is an empirical question that present cohort-based data will be able to test. University wide programming efforts, such as information provided during Welcome Week activities for incoming Freshman, can help address stigma issues and make students aware of resources that are available to them. Technology may be another possible way to address issues with stigma, as unanimous screening could be used via an online platform with tailored recommendations. Increasing student awareness of risks and symptom presentation, strengthening of on-campus services, and tailoring programs to suit their needs is critical.

Limitations

Despite noted strengths, this study is not without limitations. First, causation cannot be inferred from analyses addressing the first aim, given its cross-sectional nature. It is possible that an individual with PTSD symptoms has experienced higher levels of SLEs, which is impacting that relationship. Second, although probable PTSD significantly predicted later correlates above and beyond baseline levels, the amount of variance explained in the current study is minimal. Second, there are limitations with regard to the phenotypes examined. The measures used to assess for PTSD symptomology, depressive symptoms, and anxiety symptoms are not diagnostic measured used to verify a clinical diagnosis and thus, we do not know rates of diagnosed PTSD, depression or other anxiety disorders. Third, the trauma assessment questions do not provide detail into the nature of the endorsed trauma (e.g., the frequency of each type of endorsed interpersonal or accidental PTE). A more nuanced assessment of trauma frequency is recommended for future research. Lastly, while the longitudinal nature of the S4S data is a strength, the current study uses a second time point that is relatively close temporally to the first. As such, there is not a lot of time for new PTEs, SLES, or development of psychopathology symptoms. Further, only using two time points limits the ability to examine trajectories. Future research should utilize more than two time points to expand these findings.

Conclusions

Despite these limitations, the current study has identified both risk factors and consequences of probable PTSD in college freshman. The current results can serve as a baseline for future, longitudinal studies examining relevant factors that predict PTSD development, as well as outcomes that PTSD development may influence. The findings have clinical implications, as well. For example, for professionals creating programs aimed at identifying those students who are at the highest risk for development of PTSD, the results provide insight into which psychosocial variables may be important to target in prevention efforts. The findings also provide evidence for additional outcomes that may be prevented if PTSD interventions are delivered as early as possible. Ongoing investigation into predictors of PTSD and negative outcomes after PTSD development will aid in refining effort to identify and treat students at a greater risk for PTSD development and ensuing psychopathology.

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Table 1

Prevalence of Interpersonal Trauma Exposure and Accidental Trauma Exposure by Sex.

	Males		Females		Full Sample		X ²
	n	%	n	%	n	%	
Interpersonal trauma exposure	160	26.1	410	37.3	570	33.0	25.5 ^{****}
Accidental trauma exposure	445	66.5	775	65.7	1220	66.0	.15
Probable PTSD	48	11.4	262	32.6	310	25.3	66.1 ^{****}

Table 2

Potential predictors (Demographic, Personality, Environmental, Psychopathology, Trauma History) of PTSD symptoms.

	Individual Regression Models		Combined Regression Models	
	Mean (SD)	Std. β	Mean (SD)	St. β
Demographics				
Black (vs. White)	.17(.37)	-.05	-	-
Asian (vs. White)	.16(.36)	-.03	-	-
Other (vs. White)	.14(.35)	-.03	-	-
Sex	.66(.47)	.23***	.65(.48)	.15***
Personality				
Neuroticism	8.68(2.90)	.29***	8.62(2.88)	.01
Agreeableness	11.98(2.08)	.01	-	-
Extraversion	10.49(2.93)	-.02	-	-
Conscientiousness	13.25(1.75)	.02	-	-
Openness	12.67(2.01)	.05	-	-
Early Environment				
Peer Deviance	9.39(5.08)	.12***	9.41(5.01)	-.01
Psychopathology				
Lifetime Alcohol Use	.77(.42)	.08**	.77(.42)	1.59
Depression Symptoms	9.30(3.93)	.20***	9.25(3.91)	.17***
Anxiety Symptoms	7.11(3.34)	.15***	7.04(3.34)	.13***
Trauma History				
Accidental Trauma	1.28(.62)	-.004	1.28(.62)	.48
Interpersonal trauma	.67(.89)	.42***	.67(.89)	.43***
Total stressful life events	2.12(1.58)	.13***	2.11(1.57)	2.21*

Note

*
p<.05,

**
p<.01,

p<.001.

Analyses were run among those entering the study during the fall semester of their first year.

Pearson Correlation Matrix among PTSD symptoms at baseline and potential correlates (Demographic, Psychopathology, Trauma History) at follow up.

Table 3

	1	2	3	4	5	6	7	8
1. PTSD symptoms at baseline	–							
2. Depressive symptoms	.28**	–						
3. Anxiety symptoms	.35**	.69**	–					
4. Interpersonal TE	.28**	.15**	.18**	–				
5. Accidental TE	.03	.03	.01	.31**	–			
6. Alcohol use frequency	.05	.02	.03	.09**	.02	–		
7. Alcohol use quantity	.02	.01	.01	.03	.01	.37**	–	
8. Social support	-.02	-.24**	-.17**	-.08**	.01	-.07*	.05	–

Note.

* $p < 0.05$.

** $p < 0.01$.

Table 4

Comprehensive model including all significant predictors of PTSD symptoms.

	Mean (SD)	Std. β	R ²	Change R ²
Model 1: Depressive symptoms				
Sex	-	-.003	-	-
Baseline depressive symptoms	9.15(3.77)	.57***	-	-
Baseline PTSD symptoms	1.28(1.51)	.10**	.37	.008**
Model 2: Anxiety symptoms				
Sex	-	.02	-	-
Baseline anxiety symptoms	7.16(3.37)	.50***	-	-
Baseline PTSD symptoms	1.28(1.51)	.17***	.34	.02***
Model 3: Interpersonal PTE				
Sex	-	-.001	-	-
Baseline Interpersonal PTE	0.64(.86)	.28***	-	-
Baseline PTSD symptoms	1.25(1.49)	.12**	.13	.01**

Note

*
p<.05,**
p<.01,***
p<.001.

Analyses were run among those entering the study.