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Childhood trauma and problem behavior: Examining the mediating roles of experiential avoidance and mindfulness processes

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Abstract

Objective: Childhood trauma is associated with a variety of risky, unhealthy, or problem behaviors. The current study aimed to explore experiential avoidance and mindfulness processes as mechanisms through which childhood trauma and problem behavior are linked in a college sample.

Participants: The sample consisted of college-aged young adults recruited November–December, 2016 ($N = 414$).

Methods: Participants completed self-report measures of childhood trauma, current problem behavior, experiential avoidance, and mindfulness processes. Bootstrapped mediation analyses examined the mechanistic associations of interest.

Results: Mediation analyses indicated that experiential avoidance was a significant mediator of the association between childhood trauma and problem behavior. Additionally, multiple mediation analyses indicated that specific mindfulness facets—act with awareness and nonjudgment of inner experience—significantly mediated the same association.

Conclusions: Interventions for college students who have experienced childhood trauma might profitably target mechanisms such as avoidance and mindfulness in order to minimize engagement in problem behavior.

Keywords

mental health; trauma; experiential avoidance; mindfulness; problem behavior

Introduction

Many forms of psychopathology can be defined by an individual's engagement in problem behaviors. These types of problem behaviors include excessive alcohol, drug, or tobacco use; aggressive behavior; binge eating with or without purging; restrictive eating; risky sexual behavior; and self-injurious behavior. College-aged students may be particularly

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likely to engage in many of these problem behaviors,¹⁻⁴ and the influence of these behaviors on student welfare cannot be overstated. One specific population that is particularly at risk to engage in problem behaviors are individuals that have been exposed to childhood trauma⁵⁻⁸ Given the adverse impact of problem behaviors, further elucidating the association between childhood trauma and problem behavior, specifically the mechanisms that underlie the development and maintenance of these behaviors, is increasingly important.

Childhood trauma exposure is often defined as physical, sexual, and/or emotional abuse, or physical and/or emotional neglect before the age of eighteen;⁹ childhood trauma exposure can also include more general trauma and household dysfunction, such as a serious accident, witnessing parental drug abuse, or the death of a parent.^{10,11} Research has indicated that individuals who have experienced trauma are more likely to engage in a variety of problem behaviors.¹² This association exists between adverse childhood experiences and smoking,^{5,13} subsequent alcohol abuse,^{6,7} high-risk sexual behavior,^{7,14} disordered eating,^{8,15} and self-injury.¹⁶ Further, the amount of childhood trauma exposure appears to have a direct effect on poorer adolescent and adult functioning. Seminal work by Felitti et al. (1998) found a graded association between the number of categories of childhood exposure endorsed and increased risk of adult health risk behaviors, including smoking, physical inactivity, alcohol and drug abuse, and a history of having a sexually transmitted disease, even when adjusting for age, sex, race, and educational attainment.¹² Childhood trauma exposure appears to have a unique dose-response association with various types of problematic health behaviors, yet the mechanisms through which trauma exposure may affect health behavior are not fully understood.

The problem behaviors that are often associated with childhood trauma are frequently comorbid.¹⁷⁻¹⁹ For example, over 40% of alcohol-dependent men and women also report nicotine dependence.²⁰ Additionally, substance use has long been associated with bulimia nervosa and binge eating behavior^{21,22} Self-injurious behavior has also been linked to disordered eating²³ and to substance use disorders.²⁴ Additionally, individuals with substance use difficulties are more likely to partake in risky sexual behaviors,^{25,26} violent or aggressive behavior has also been associated with substance use.²⁷⁻²⁹

Given the robust associations among problem behaviors, previous research has successfully identified a common higher order factor that may account for this covariation.^{18,19,30} Previous work has posited that while problem behaviors present uniquely in form, they may nonetheless be similar in function. Specifically, these behaviors may be conceptualized as *experiential avoidance*, which is defined as an unwillingness to be in contact with internal experiences (such as thoughts, emotions, memories, urges, or bodily sensations) and any attempt to alter, change, or control such experiences.^{17,19,30,31} Many maladaptive behaviors, including less obvious manifestations such as excessive internet usage, have been identified as attempts to avoid unpleasant internal experiences.^{17, 31-33}

Avoidant behavioral coping strategies may provide immediate, short-term relief from unpleasant thoughts or emotions.^{19,31,34} Individuals who struggle with emotion regulation may be more impulsive³⁵ and may be likely to respond to unpleasant internal states by engaging in behaviors that provide immediate relief.¹⁹ However, engaging in behaviors in

order to avoid unpleasant stimuli may be a reflection of greater responsiveness to short-term versus long-term contingencies.^{19,31} In addition to the potential life-interfering costs of avoidance (i.e., injury, legal problems), the long-term consequences of avoidance include increased exposure to, intensity of, or duration of the unwanted stimuli; in short, the consequences are a paradoxical amplification of the unpleasant experience.^{19,31,34,36,37}

Individuals who have experienced trauma may be especially likely to engage in avoidance strategies as an attempt to control or suppress internal experiences.³⁸ While these strategies are not uncommon, engaging in experiential avoidance after trauma exposure is associated with greater psychological distress and may actually function to increase the severity of the unpleasant internal experiences over time.^{37,39,40} Previous work has demonstrated that trauma-exposed college students who experience more severe post-traumatic stress symptoms also report lower emotional acceptance, difficulties with impulse control when distressed, and limited strategies for emotion regulation.⁴¹ Experiential avoidance has also been shown to act as a mediator in the association between trauma exposure and various adverse psychological outcomes (e.g., PTSD symptoms, depression, anxiety, and stress).^{42–45} These findings indicate that experiential avoidance may partially explain the association between trauma and psychological distress. Of additional importance, constructs that reflect processes antithetical to experiential avoidance such as *mindfulness* (an open and nonjudgmental awareness of presentmoment experiences), and *acceptance* (a recognition and willing embrace of psychological experiences without attempts to change or alter them), appear to be associated with more favorable outcomes following trauma.³⁹

Based on the literature demonstrating 1) the association between trauma exposure and experiential avoidance; 2) the association between trauma exposure and various problem behaviors; and 3) the conceptualization of problem behaviors as potentially avoidant in function, the current study aimed to examine experiential avoidance as a mediator of the association between childhood trauma exposure and problem behaviors among college students. A study by Kingston and colleagues (2010) demonstrated that the relation between childhood trauma and the tendency to engage in problem behaviors was fully mediated by experiential avoidance among a clinical sample.¹⁷ Additionally, a recent study by Lewis and Naugle (2017) demonstrated that experiential avoidance partially mediated the association between childhood trauma and problem behavior in a nonclinical sample of college students.⁴⁶ College-aged students may be particularly susceptible to risky, impulsive behavior, and thus, identifying and furthering our understanding of potentially modifiable process-based mechanisms that may be associated with these behaviors is critical in this population. Therefore, given the finding that avoidance has been shown to *partially* mediate the association between childhood trauma and problem behavior in collegeaged students, the current study aimed first to replicate the work of Lewis and Naugle (2017) by exploring this association in a college sample in an effort to further our understanding of the extent to which experiential avoidance may mediate this association in a college student population.

Additionally, because experiential avoidance can be defined as an unwillingness to be in contact with internal experiences and because many problem behaviors can be conceptualized as impulsive responses aimed at providing short-term relief from these unwanted internal experiences, the present study aimed to extend the literature by exploring

components of mindfulness as possible mediators of the same association. The existing literature frequently measures mindfulness by examining five interrelated, yet specific, mindfulness facets that may differentially predict outcomes and be targeted individually in clinical care.^{47,48} These facets include: Observe (observing present moment experience), Describe (describing present moment experience), Act with Awareness (remaining aware while engaging in chosen actions rather than acting on “autopilot”), Nonjudgment (taking a nonjudgmental stance toward inner experience), and Nonreactivity (allowing internal experiences to come and go without reacting).⁴⁷ Therefore, given that mindfulness requires being in contact with internal experiences nonjudgmentally while acting, it may play an important role in influencing engagement in problem behaviors. Previous work has indicated that the nonjudgment of experience mindfulness facet predicts PTSD avoidance symptom severity above and beyond measures of experiential avoidance, indicating the importance of exploring the impact mindfulness processes.⁴⁹

The aim of the current study was to 1) further elucidate the mechanisms by which childhood trauma impacts engagement in problem behavior, and 2) determine whether these behaviors may share a common avoidant function. We hypothesized that a higher frequency of childhood traumatic experiences would predict higher levels of current experiential avoidance and lower levels of mindfulness, which would in turn predict higher levels of current engagement in problem behavior. The examination of these process-based mechanisms may allow for the identification of targets for future prevention and intervention efforts for this population.

Method

Participants and Procedure

Participants were college students recruited through an online research system at a Midwestern university. Students who chose to participate were redirected to the university’s Qualtrics system, a secure survey platform. The first page displayed was the informed consent document, and proceeding to the survey was indicative of the student’s consent. Participants then provided responses and received partial course credit for participation. In total, 414 responses were gathered. The project was approved by the university’s Institutional Review Board (IRB).

Measures

Experiential Avoidance—Experiential avoidance was measured using the Acceptance and Action Questionnaire -II (AAQ-II).⁵⁰ The AAQ-II is a 7-item measure that utilizes a 7-point Likert scale with higher overall scores indicative of greater experiential avoidance. Example items include : “*I’m afraid of my feelings,*” and “*Emotions cause problems in my life*”. The measure demonstrates satisfactory convergent and discriminant validity as well adequate test-retest reliability.⁵⁰ The validation study also reported good internal consistency across various samples (mean $\alpha = .84$).⁵⁰

Problem behaviors—Problem behaviors, such as deliberate self-harm, nicotine use, excessive internet use, drug use, excessive exercise, excessive alcohol use, binge eating,

sexual promiscuity, aggression, and restrictive eating were measured using the Composite Measure of Problem Behaviors (CMPB).³⁰ The CMPB uses a 46-item questionnaire to measure ten problem behaviors: deliberate self-harm, restrictive eating, binge eating, excessive alcohol use, drug use, nicotine use, sexual promiscuity, excessive internet/computer game use, excessive exercise, and aggression. The factor analysis in the validation paper found that nearly all lower-order factors significantly loaded onto a higher-order factor of problem behaviors, excepting restrictive eating and excessive exercise.³⁰ As such, these two factors were removed from further analysis. We replicated this in our scoring procedure for the current analyses and removed restrictive eating and excessive exercise items, resulting in a 36-item scale. Each item is scored on a 1–6 scale (*1 = very unlike me, 6 = very like me*). A composite score is the average of all items. Higher scores indicate a greater tendency to engage in problem behaviors. In the validation study, the measure shows good internal consistency, even when including restrictive eating and excessive exercise ($\alpha = .87$), and alphas for each included category of behavior were good (α s = .74–.91).³⁰ The measure also showed acceptable convergent validity and test-retest reliability.³⁰

Childhood Trauma.—The Early Trauma Inventory Self-Report Short Form (ETISR-SF) was used to measure cumulative childhood trauma.¹⁰ The ETISR-SF measures physical, emotional, and sexual abuse, as well as general trauma. The measure asks participants to indicate whether they have experienced each of 27 specific traumatic events before the age of 18 (*0 = No, 1 = Yes*). A total score is calculated, indicating total traumas experienced. The mean total for healthy controls demonstrated in the validation study was 3.5 ($SD = 3.3$). The measure demonstrates adequate internal consistency for each domain (Cronbach's α s .70–.87), and the short-form version correlates highly with the original long version.¹⁰ Due to a clerical error, one item from the original measure was missing in this sample.

Mindfulness.—The Five Facet Mindfulness Questionnaire (FFMQ) was utilized to measure five mindfulness processes.⁴⁷ The FFMQ is a 39-item measure that utilizes a 5-point Likert scale to measure five mindfulness facets: Observing, Describing, Acting with Awareness, Non-Judging of Experience, and Non-Reacting to Inner Experience. Higher scores on each subscale are indicative of greater mindfulness. In the validation study, all facets except for Observe were shown to load onto a higher order mindfulness factor. Each facet demonstrates adequate internal consistency (α s = .75–.91).⁴⁷

Statistical Analyses

Mediation analyses were conducted using SPSS, version 23. The PROCESS macro in SPSS, version 23⁵¹ was used to test if experiential avoidance (as measured by the AAQ-II) and the five facets of mindfulness (as measured by the FFMQ) mediated the association between childhood traumatic experiences and current problem behavior. For the mindfulness analysis, a multiple mediation analysis (simultaneously including all five processes) examined the most predictive processes while controlling for common variability among facets. Gender was entered as a covariate in both analyses. Results reflect three pathways: 1) the path between childhood trauma and mediator, 2) the path between mediator and outcome *and* the path between childhood trauma and outcome while controlling for mediator (direct effect), and 3) the path between childhood trauma and outcome by way of the mediator

(indirect effect). The macro uses a bootstrapping method that provides a confidence interval around the effect, with a significant indirect effect indicated by a bootstrapped confidence interval not including zero. A 95% confidence interval was computed using 10,000 resamplings. All reported coefficients are unstandardized. Percent mediation statistics were reported to estimate the magnitude of the indirect effect.

Results

Descriptive statistics are reported in Table 1. Item-level missing data were handled using person mean imputation to estimate missing values prior to creating composite scores. This method has been identified as acceptable for missing data in Likert ratings⁵² and has been used in previous psychological research.⁵³ Person mean imputation method was used on the AAQ-II (when < 20% of items were missing on the scale), FFMQ (when <20% of items were missing on the subscale), and CMPB (when < 10% missing on the scale). Zeros were imputed on the ETISR-SF (when < 20% of items were missing on the scale). This imputation method resulted in the following percentages of participants having imputed data for each of the measures: AAQ-II: 1.4%; Observe: 1.4%; Describe: 1%; Act with Awareness: 2.7%; Nonjudgment: 1.4%; Nonreactivity: 1.9%; CMPB: 8.5%; ETISR-SF: 4.6%. In the case that >20% of items were missing on the scale or subscale for a given participant (>10% on the CMPB), the scale was counted as missing, and the PROCESS macro did not include the data. Additionally, three participants did not clearly report their gender, and four reported their gender as “other.” Because imputation would not be appropriate for this variable and because we did not have enough participants to examine the gender variable beyond male versus female, these participants were also excluded from the PROCESS analyses. In total, 24 participants (5.8%) were excluded in the mediation analyses using the AAQ-II ($N = 390$), and 23 participants (5.6%) were excluded in the mediation analyses using the FFMQ ($N = 391$).

Avoidance

As depicted in Table 2 and Figure 1a, childhood trauma was significantly related to avoidance. Avoidance was related to problem behavior. A direct effect of childhood trauma on problem behavior was observed, and gender was a significant covariate. An indirect effect of avoidance in the association between trauma and problem behavior was observed. Avoidance accounted for nearly half of the total effect ($P_M = .43$). See Table 2 for coefficients and confidence intervals.

Mindfulness

A multiple mediation model was utilized with all of the FFMQ subscales to simultaneously examine the indirect effects of these facets on the relation between childhood trauma and problem behavior (see Table 3 for coefficients and confidence intervals and Figure 1b for depiction). The first path examined relations between childhood trauma and each facet while controlling for gender. Childhood trauma was related to the Observe, Act with Awareness, and the Nonjudgment facets. Childhood trauma was not related to the Describe or Nonreactivity facets.

The second path examined the mindfulness facets and previous trauma as predictors of problem behavior, while controlling for gender. Act with Awareness and Nonjudgment facets were related to decreased problem behavior. The Observe, Describe, and Nonreactivity facets were not related to problem behavior. Gender was a significant covariate.

Finally, an indirect effect of Act with Awareness and Nonjudgment facets on the association between traumatic experiences and problem behavior was observed. Act with Awareness ($P_M = .19$) and Nonjudgment ($P_M = .19$) facets each accounted for about one-fifth of the total effect.

Comment

The current study identified experiential avoidance as a partial mediator of the association between childhood trauma and engagement in problem behavior in a college sample, which was consistent with recent work by Lewis and Naugle (2017). Additionally, the present study extended the literature by exploring the mediational roles of mindfulness facets in the association between childhood trauma and problem behavior. Importantly, two specific components of mindfulness were shown to be significant mediators of the association between childhood trauma and problem behavior - acting with awareness and nonjudgment of inner experiences.

Individuals who have experienced trauma have an increased propensity to engage in a variety of problem behaviors.¹² Many problem behaviors co-occur, and previous work has identified a higher order factor that accounts for much of the covariation in formally different problem behaviors.^{17–19} Trauma-exposed individuals often demonstrate unwillingness to remain mindfully in contact with inner experiences and engage in avoidant coping strategies.^{38,54} Previous work has identified experiential avoidance as a mechanism through which the association between trauma and adverse outcomes may exist.^{17,42–45,55} More specifically, experiential avoidance has been shown to be a significant mediator of the relation between trauma and problem behavior.^{17,46} The current study thus helped to further elucidate the potential common avoidant *function* of engagement in a variety of problem behaviors in trauma-exposed college-students. Understanding the “why” or purpose of behavior provides direction for approaching the “how” of behavior change. Given that college-aged students may be especially likely to engage in various problem behaviors,^{1–4} these results should inform intervention efforts to improve student health and welfare.

While the exploration of specific mindfulness facets in the multiple-mediation model was exploratory, the current findings fit well within the existing literature. Previous research has indicated that specific mindfulness facets may be differentially associated with psychological difficulties such as anxiety and depressive symptoms^{56,57} and disordered eating behaviors.^{58,59} Additionally, previous work has proposed that the interaction between specific aspects of mindfulness may predict anxiety and depressive symptoms as well as substance use.^{60,61} More specifically, the observing facet of mindfulness, in the absence of the other processes, may even sometimes be associated with worse psychological and behavioral outcomes.^{47,56,58,59} Thus, mindfulness appears to be a multifaceted construct,⁴⁷

and recent work has also proposed that mindfulness skills may build upon one another and can be therapeutically targeted individually.⁴⁸ These findings highlight the importance of identifying the mechanistic roles of mindfulness facets in research and recognizing these facets when developing interventions.

The current study is consistent with previous work in its identification of two specific mindfulness processes – act with awareness and nonjudgment of experience -- that help to elucidate a fine-grained understanding of these mechanistic associations for targeted intervention. While two specific facets mediated the association between childhood trauma and problem behavior mindfulness as an overarching construct, but rather helps to elucidate the specific processes that are driving the association. For example, in the current study, the experience of childhood trauma was *positively* associated with the observe facet of mindfulness. Given that the observe and describe facets were not significant mediators of the association between childhood trauma and problem behavior, while nonjudgment of experience was, it may be that individuals who are able to observe and/or describe internal experiences, but subsequently make harsh judgments about these experiences may then be more likely to engage in problem behavior. This aligns with research demonstrating that nonjudgmental acceptance is an important process for traumaexposed individuals in terms of PTSD symptoms^{49,62} and coping-oriented alcohol use.⁶³ A recent study showed that combat-exposed military veterans with PTSD vs. without PTSD scored lower on mindful nonjudgment scales, but showed no significant differences on general mindful awareness scales.⁶⁴ These findings do not necessarily indicate, then, that the observe and describe facets of mindfulness are unimportant, but rather that they may not be differentially helpful in isolation. Similarly, nonreactivity was not indicated as a mediator and as such its presence is not a primary mechanistic driver of the association between trauma and problem behavior. Hence, we propose that the present results lend support to the idea that nonjudgment of inner experience, as well as action with awareness, are of particular significance in terms of problem behavior.

Clinical Implications

The identification of these mechanisms has great utility in terms of developing preventive interventions. While it is clear that children who have experienced trauma are at risk for a wide variety of adverse outcomes, specific problem behaviors likely will not manifest immediately and may change over time. By recognizing the underlying function of the behaviors, interventions can begin to target these mechanistic constructs at an earlier age. Additionally, when clinically addressing problem behaviors with individuals who are currently engaging in multiple problem behaviors (e.g., smoking and alcohol), interventions may benefit from targeting the function of the behavior, rather than the form. For example, rather than attempting to eliminate a behavior through controlling, reducing, or avoiding internal or external cues that may activate that specific behavior, interventions could instead aim to foster a broad nonjudgmental acceptance of experience and to promote present-moment awareness while choosing actions. Similarly, by targeting higher-order process-based constructs, group interventions could include individuals who present with formally different behaviors, allowing individuals to connect over functionally similar behavior. The current findings indicate that the implementation of interventions that specifically target an

increase in nonjudgment of inner experience, as well as an improved ability to remain aware when choosing behaviors, may be key for lessening engagement in problem behavior. Acceptance- and mindfulness-based interventions, such as Acceptance and Commitment Therapy (ACT),⁶⁵ which target these processes, may be especially well-suited for improving behavioral outcomes for trauma-exposed individuals.

Limitations

While the current study extends the literature and has important clinical implications, several limitations must be acknowledged. First, participants were reporting retrospectively on childhood traumatic experiences, and this introduces potential recall bias. Next, the data presented are cross-sectional, so no causal conclusions can be drawn. Additionally, the appropriateness of performing mediation analyses using cross-sectional data has been questioned,⁶⁶ and analyses should thus be interpreted with caution. However, given that: a) childhood trauma necessarily temporally precedes problem behavior in adulthood, b) experiential avoidance has previously been similarly explored as a mediator of the association between childhood trauma and psychological⁴² and behavioral¹⁷ outcomes, and c) improvements in acceptance-based processes have been shown to mediate treatment outcomes in acceptance-based interventions for health behavior change (e.g., weight loss and smoking cessation),⁶⁷ the analyses were justified as a method for exploring the processes at work and making theoretical inferences as suggested by Hayes (2013; pp. 15–18)⁵¹ and Hayes and Rockwood (2017).⁶⁸ Additionally, the timing or specificity of the trauma was not explored. Future research should examine specific traumatic experiences, as well as the age when such traumas occur, to explore the association with adverse long-term outcomes.

Lastly, some important predictors of problematic health behaviors were not examined in this study. While there is a plethora of evidence that childhood trauma exposure significantly predicts problematic health behaviors, other contextual factors present in childhood have also been shown to predict problem behavior. For example, childhood socioeconomic status has been shown to be associated with later smoking^{69,70} and alcohol-related disorders.⁷¹ Additionally, other psychological variables may also mediate the association between childhood trauma and problem behavior. For example, research has demonstrated that mood and anxiety disorders partially mediate the effect of adverse childhood experiences on substance dependence risk⁷² and that socio-emotional skills deficits may help to explain the association between childhood maltreatment and adult smoking.⁷³ Future research should examine the complex and potentially reciprocal associations between childhood trauma exposure and other potential confounders of the relation with problem behaviors, including childhood and psychological variables.

Conclusion

In conclusion, the current study identified avoidance and mindfulness processes as mechanisms through which the association between childhood trauma and problem behavior may exist. These results lend support to the idea that various problem behaviors, while different in form, may serve a common avoidant function. Future research should continue to explore the nature of these mechanisms in various populations, while also implementing

and evaluating the efficacy of acceptance- and mindfulness-based interventions in improving outcomes for individuals who have experienced childhood trauma.

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Figure 1.

a) Unstandardized coefficients for association between childhood trauma and problem behavior, as mediated by experiential avoidance. b) Unstandardized coefficients for association between childhood trauma and problem behavior, as mediated by nonjudgment of experience and act with awareness

* = $p < .05$, ** = $p < .01$, c = CI does not include zero

Childhood Trauma = ETISR-SF Score

Experiential Avoidance = AAQ-II Score

Nonjudgment = Nonjudgment Facet of FFMQ Score

Act with Awareness = Act with Awareness Facet of FFMQ Score

Problem Behavior = Composite Measure of Problem Behaviors Score

Table 1.**Participant Characteristics.**

<i>Demographics (N = 414)</i>	<i>N (%)</i>
Gender	
Male	142 (34.3%)
Female	265 (64.0%)
Unsure, prefer not to answer, other	4 (0.9%)
Missing	3 (0.7%)
Age, M(SD)	19.16 (1.33)
Race	
White, Non-Hispanic	282 (68.1%)
White Hispanic	56 (13.5)
African American	13 (3.1%)
Asian American	40 (9.7%)
American Indian or Alaska Native	1 (0.2%)
Native Hawaiian or Pacific Islander	1 (0.2%)
Biracial or Multiracial	15 (3.6%)
Missing	6 (1.4%)
Employment Status	
Full-time	12 (2.9%)
Part-time	188 (45.4%)
Unemployed	211 (51%)
Missing	3 (0.7%)
Year in College	
1	218 (52.7%)
2	106 (25.6%)
3	54 (13%)
4	29 (7%)
Sexual Orientation	
Heterosexual	369 (88.1%)
Homosexual, Bisexual, or Other	40 (9.7%)
Missing	5 (1.2%)
ETISR-SF, M(SD)	6.28 (4.89)
AAQ-II, M(SD)	21.10 (8.98)
FFMQ	
Observe	24.58 (5.38)
Describe	25.84 (5.46)
Act with Awareness	24.93 (5.46)
Nonjudgment	25.05 (6.11)
Nonreactivity	20.59 (3.9)
CMPB, M(SD)	2.48 (0.70)

Note: ETI = ETISR-SF = Early Trauma Inventory Self Report-Short Form; AAQ-II = Acceptance and Action Questionnaire-II; FFMQ = Five-Facet Mindfulness Questionnaire; CMPB = Composite Measure of Problem Behaviors.

Table 2.

Association between childhood trauma and problem behavior, as mediated by experiential avoidance.

Consequent	Antecedent	Antecedent	CI	t	p
Avoidance	Childhood Trauma	.7451 (.085)	[.5781, .9122]	8.7704	<.001
	Gender	.008 (.0048)	[-.0013, .0174]	1.6869	.0924
Problem Behavior	Avoidance	.0198 (.004)	[.0118, .0277]	4.9008	<.001
	Childhood Trauma	.0199 (.0074)	[.0054, .0344]	2.6895	.0075
	Gender	.0009 (.0004)	[.0001, .0016]	2.2755	.0234
	Indirect Effect	Effect (Boot SE)	BootCI		
Problem Behavior	Avoidance	.0147 (.0039)	[.0079, .0233]		

Note. *N* = 390. Avoidance = Acceptance and Action Questionnaire-II; Childhood Trauma = Early Trauma Inventory Self Report-Short Form (total number of previous traumatic experiences); Problem Behavior = Composite Measure of Problem Behaviors. Boot SE = Bootstrapped Standard Error. CI = Confidence Interval. BootCI = Bootstrapped Confidence Interval.

Table 3.

Association between childhood trauma and problem behavior, as mediated by five facets of mindfulness.

Consequent	Antecedent	Coefficient (SE)	CI	<i>t</i>	<i>p</i>
Mindfulness facets (FFMQ)					
Observe	Childhood Trauma	.2562 (.0547)	[.1486, .3638]	4.6813	<.001
	Gender	-.0001 (.0031)	{-.0062, .0059}	-.0378	.9699
Describe	Childhood Trauma	-.0761 (.057)	[-.1883, .036]	-1.3342	.1829
	Gender	.0014 (.0032)	[-.0049, .0077]	.4375	.662
Act with Awareness	Childhood Trauma	-.2546 (.0554)	[-.3636, -.1456]	-4.5941	<.001
	Gender	-.0031 (.0031)	[-.0092, .003]	-.9952	.3202
Nonjudgment	Childhood Trauma	-.4111 (.0604)	[-.5298, -.2923]	-6.8071	<.001
	Gender	-.0003 (.0034)	[-.007, .0064]	-.0837	.9333
Nonreactivity	Childhood Trauma	-.0061 (.0408)	[-.0863, .0741]	-.15	.8808
	Gender	-.0032 (.0023)	[-.0077, .0013]	-1.3894	.1655
Problem Behavior	FFMQ				
	Observe	.0077 (.0072)	[-.0065, .0218]	1.0667	.2868
	Describe	-.0088 (.0068)	[-.0222, .0046]	-1.2934	.1967
	Act with Awareness	-.0247 (.007)	[-.0385, -.011]	-3.5309	.0005
	Nonjudgment	-.0157 (.0067)	[-.0289, -.0025]	-2.3339	.0201
	Nonreactivity	-.0146 (.0094)	[-.033, .0038]	-1.5594	.1197
	Childhood Trauma	.0182 (.007)	[.0044, .032]	2.5946	.0098
	Gender	.0009 (.0004)	[.0002, .0016]	2.4611	.0143
	Indirect Effect	Effect (Boot SE)	BootCI		
Problem Behavior	FFMQ				
	Observe	.002 (.0019)	[-.0014, .0065]		
	Describe	.0007 (.0008)	[-.0003, .0032]		
	Act with Awareness	.0063 (.0022)	[.0026, .0116]		
	Nonjudgment	.0064 (.0031)	[.001, .013]		
	Nonreactivity	.0001 (.0007)	[-.0012, .0019]		

Note. *N* = 391. FFMQ = Five Facet Mindfulness Questionnaire; Childhood Trauma = Early Trauma Inventory Self Report Short-Form (total number of previous traumatic experiences); Problem Behavior = Composite Measure of Problem Behaviors; Boot SE = Bootstrapped Standard Error. CI = Confidence Interval. BootCI = Bootstrapped Confidence Interval.