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The Relation between Early Maladaptive Schemas, Depression, and Generalized Anxiety among Adults Seeking Residential Treatment for Substance Use Disorders

Ryan C. Shorey, PhD [Assistant Professor],
Ohio University

Joanna Elmquist, MA [Clinical Psychology Graduate Student],
University of Tennessee

Scott Anderson, PhD [Clinical Director], and
Cornerstone of Recovery in Louisville, Tennessee

Gregory L. Stuart, PhD [Professor]
University of Tennessee

Abstract

Objective—Previous research has shown that early maladaptive schemas (EMS) play an important role in substance use, depression, and anxiety. However, little work has examined the role of EMS within the context of all three concurrently. The goal of this study was to determine the role of EMS in predicting symptoms of Major Depressive Disorder (MDD) and Generalized Anxiety Disorder (GAD) among adults in residential treatment for substance dependence.

Method—We used pre-existing patient records of adults diagnosed with a substance use disorder from a residential substance use treatment facility ($N = 122$).

Results—The EMS domains of *disconnection and rejection* and *impaired limits* were associated with symptoms of MDD and the domain of *impaired autonomy and performance* was associated with symptoms of GAD even after controlling for age, gender, years of education, alcohol use, drug use, and symptoms of MDD (when predicting GAD) and GAD (when predicting MDD).

Conclusions—Findings suggest that EMS may play an important role in comorbid mental health problems among men and women in residential substance use treatment. Continued treatment outcome research is needed to examine whether modification of EMS results in improved mental health and substance use outcomes.

Keywords

Early maladaptive schemas; substance use disorders; depression; generalized anxiety

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Results from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) revealed 12-month prevalence rates for alcohol dependence of 3.81%, drug use

disorders of 2%, Major Depressive Disorder (MDD) of 9.21%, and Generalized Anxiety Disorder (GAD) of 2.06% (Grant et al., 2005). However, these disorders often co-occur. For example, among individuals meeting criteria for alcohol dependence, 20.48% also met criteria for MDD and 5.69% for GAD (Grant et al., 2005). The effects of substance use disorders, MDD, and GAD are compounded when they occur contemporaneously, as is often the case (Bradizza, Stasiewicz, & Paas, 2006; Kessler et al., 1997). Research suggests that individuals with co-morbid depression and/or anxiety disorders enter substance use treatment with more substance-related problems than do those with no comorbid diagnoses (e.g., Burns, Teesson, & O'Neill, 2004) and are at greater risk for substance use relapse (Bradizza, Stasiewicz, & Paas, 2006). Prior research suggests that one underlying mechanism for the comorbidity between substance use disorders and other Axis I psychopathology is specific personality traits and disorders (e.g., impulsivity, perfectionism, Cluster B symptoms; Bulik et al., 2004). The inclusion of early maladaptive schemas (EMS) as a possible explanation for the comorbidity between substance use disorders and MDD/GAD could advance our understanding of these specific comorbidities. Moreover, because EMS are known to be a highly related construct to personality traits and disorders (Young et al., 2003), it would make theoretical sense that EMS could be an underlying mechanism for these comorbidities.

EMS are “extremely stable and enduring themes, comprised of memories, emotions, cognitions, and bodily sensations regarding oneself and one's relationship with others, that develop during childhood and are elaborated on throughout the individual's lifetime, and that are dysfunctional to a significant degree” (Young et al., 2003, p. 7). As described by Young et al. (2003), EMS consist of core beliefs that are developed as a result of negative, noxious, or traumatic childhood experiences; are reinforced and remain stable throughout life; and are problematic in that they predispose individuals to the development and maintenance of psychological disorders (Young et al., 2003). Theoretically, EMS are thought to provide the foundation upon which mental health disorders are formed, underlying the development and maintenance of psychopathology (Young et al., 2003). Young and colleagues (2003) have identified 18 EMS that are grouped in to five schema domains: *disconnection and rejection*, a domain which is characterized by the expectation that one's needs may not be met; *impaired autonomy and performance*, characterized by the expectation that one cannot function on one's own; *impaired limits*, characterized by a difficulty in understanding internal and interpersonal limits; *other directedness*, characterized by a tendency to focus most of one's attention toward the needs of others; and *overvigilance and inhibition*, characterized by a tendency to focus on meeting unrealistic internalized values. the five EMS domains are theoretically and empirically related to each other (Shorey, Stuart, & Anderson, 2013c; Young et al., 2003), although they are also theoretically believed to be distinct domains (Young et al., 2003), which has been demonstrated in prior research (e.g., Saariaho, Saariaho, Karila, & Joukamaa, 2009).

EMS are highly prevalent among men and women seeking substance use treatment (e.g., Shorey, Stuart, & Anderson, 2012). For example, a number of studies have demonstrated that EMS are higher among adults in substance use treatment relative to non-substance using adults in the general population (Brotchie, Meyer, Copello, Kidney, & Waller, 2004; Roper,

Dickson, Tinwell, Booth, & McGuire, 2010; Shorey, Stuart, & Anderson, 2013a; Shorey, Stuart, & Anderson, 2014). Research has also demonstrated that individuals with an alcohol use disorder do not differ from individuals with an opioid use disorder on the majority of EMS (Shorey, Stuart, & Anderson, 2013b) and initial research suggests that EMS decline after standard substance use treatment (Shorey, Stuart, Anderson, & Strong, 2013) or substance use treatment specifically designed to target EMS (Ball, 2007).

EMS are also prevalent among individuals experiencing symptoms of MDD and GAD. For example, Schmidt and colleagues (1995) found EMS within the domains of *impaired autonomy and performance* and *disconnection and rejection* to account for 33% of the variance in symptoms of depression. Similarly, Cámara and Calvete (2012) found EMS within the domain of *disconnection and rejection* to be associated with symptoms of MDD. Additionally, in one study of adults seeking treatment for opioid dependence, researchers found EMS to be a better predictor of MDD symptoms than gender, with all five schema domains significantly predicting MDD symptoms (Shorey et al., 2013c). According to Young and colleagues (2003), the *disconnection and rejection* domain describes many of the core thoughts, feelings, and behaviors of MDD. *Disconnection and rejection* is characterized, in part, by having a strong belief that one is “defective,” a sense of social isolation, and fears that other people will abandon or abuse them (Young et al., 2003). Thus, it would make sense that this EMS domain would be associated with MDD symptoms.

Several studies have also shown EMS to be associated with symptoms of anxiety and related disorders, including social phobia (Pinto-Gouveia, Castilho, Galhardo, & Cunha, 2006), posttraumatic stress disorder (Cockram, Drummond, & Lee, 2010), panic disorder with agoraphobia (Hedley, Hoffart, & Sexton, 2001), obsessive compulsive disorder (Atalay, Atalay, Karahan, et al., 2008), and general symptoms of anxiety (Delattre et al., 2004; Hawke & Provencher, 2011). Further, Schmidt and colleagues (1995) found EMS within the domains of *impaired autonomy and performance* and *overvigilance and inhibition* to account for 34% of the variance in symptoms of anxiety. Similarly, Cámara and Calvete (2012) also found EMS within the domain of *impaired autonomy and performance* to be associated with symptoms of anxiety. Theoretically, the EMS domain of *impaired autonomy and performance* may be associated with anxiety, as this domain describes individuals, in part, who hold beliefs that they will be unable to survive, separate, perform successfully, and function independently, and that they are vulnerable to bad things happening to them (Young et al., 2003).

No investigations have been conducted to examine the relationship between EMS and GAD specifically, nor to examine the relationship between EMS, MDD, and GAD among individuals with substance dependence. Understanding the relative influence of particular EMS domains on symptoms of MDD and GAD among substance dependent individuals could provide insight into the nature of the relationship between substance use and mood and anxiety disorders more generally, as well as support the conceptualization of EMS as an underlying mechanism for the comorbidity between different disorders. Given the often chronic nature of substance use disorders and symptoms of MDD and GAD, it is possible that treatment outcomes may improve from focusing on lifelong psychological vulnerabilities, such as EMS.

The current study examined the relationship between EMS and symptoms of MDD and GAD in a sample of adults in residential treatment for substance dependence. We hypothesized that the EMS domain of *disconnection and rejection* would be associated with symptoms of MDD and that the EMS domain of *impaired autonomy and performance* would be associated with symptoms of GAD. Both EMS theory and prior research support that these particular EMS domains would be associated with these specific symptom clusters. We also expected these associations to be present even after controlling for demographic variables known to be associated with MDD, GAD, or substance use disorders (e.g., age, gender, and years of education; Kessler et al., 2012), substance use (alcohol and drug), the shared variance in GAD and MDD symptoms, and the shared variance in EMS domains.

Method

Participants and Procedures

We reviewed patient records from a residential substance use treatment center located in the Southeastern United States. The 28 to 30-day program implemented at this center, grounded in large part by the 12-step model, also places emphasis on the assessment and treatment of patients' EMS. Adults who are 18 years of age or older and presenting with a primary substance use disorder are eligible for admission, upon which they complete several assessments following medical detoxification (when necessary). Additionally, psychiatric diagnoses, based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000), are made by a team of treatment providers, consisting of a psychiatrist, a licensed psychologist, a general physician, and substance use counselors.

We searched patient records from May 2012 to August 2012 and included all patients admitted to the treatment facility during this time, yielding a total of 122 participants. The majority were male ($n = 81$, 66.4%) and the mean age was 37.36 ($SD = 12.47$). Patients most frequently identified themselves as Caucasian (93.6%), followed by African American (3.2%), and "Other" (e.g., Indian; 3.2%). Most were married (53.3%) at the time of admission to treatment. Patients reported an average of 13.71 years of education ($SD = 2.39$). The most common substance use diagnosis was alcohol dependence (50%), followed by opioid dependence (26.2%), polysubstance dependence (13.9%), cannabis dependence (3.3%), and "other" (e.g., amphetamine dependence, cocaine dependence; 6.6%). This sample represents a subsample of patients reported on elsewhere (Shorey, Brasfield, Anderson, & Stuart, 2014). All patients provide informed consent for their medical records to be reviewed for research purposes at intake to the treatment facility. All study procedures were approved by the institutional review board of the last author's university (University of Tennessee).

Measures

EMS—We used the Young Schema Questionnaire – Long Form, Third Edition (YSQ-L3; Young & Brown, 2003) to assess patients' EMS. The 232 items on the YSQ-L3 assess 18 EMS that are grouped into five domains, as proposed by Young and colleagues (2003) in

their most recent conceptualization. Items are rated on a six point Likert-scale ranging from 1 (“completely untrue of me”) to 6 (“describes me perfectly”). Items endorsed as a 4, 5, or 6 are considered to be of particular relevance to the respondent; these items are summed and included in the total score for each EMS. Scores of 1, 2, and 3 are recoded into “0”. Schema domain scores are calculated by summing the relevant schemas within each domain. Potential score ranges for each schema domain are: *disconnection and rejection* (0-408); *impaired autonomy and performance* (0-282); *other directedness* (0-246); *impaired limits* (0-155); and *overvigilance and inhibition* (0-306; Young & Brown, 2003). The YSQ-L3 has demonstrated good reliability, validity, and factor structure (e.g., Cockram et al., 2010; Saariaho et al., 2009).

MDD and GAD—We used the Psychiatric Diagnostic Screening Questionnaire (PDSQ; Zimmerman, 2002) to evaluate symptoms of depression and anxiety. The PDSQ consists of 125 items to which participants respond “yes” or “no.” Participants receive a score of 1 for each item to which they respond “yes,” with higher scores indicating that an individual is experiencing greater symptoms within a given subscale. The PDSQ yields subscale scores encompassing the symptoms of several clinical diagnoses, including MDD (22 items) and GAD (10 items; Zimmerman, 2002). The PDSQ has demonstrated excellent reliability, validity, and factor structure (e.g., Sheeran & Zimmerman, 2004; Zimmerman & Mattia, 2001).

Alcohol Use—The Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, De La Fuente, & Grant, 1993) was used to evaluate alcohol use in the year prior to treatment admission. The 10 items of the AUDIT assess the quantity, frequency, and intensity of drinking; symptoms of dependence and tolerance; and alcohol-related consequences. Summed scores on the AUDIT can range from 0 to 40. Adequate internal consistency and reliability have been demonstrated (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001).

Drug Use—We used the Drug Use Disorders Identification Test (DUDIT; Stuart et al., 2003; Stuart et al., 2004) to evaluate participants’ use of the following substances in the year prior to treatment: cannabis, cocaine, hallucinogens/PCP, non-prescribed stimulants, non-prescribed sedatives/hypnotics/anxiolytics, non-prescribed opiates, and “other” substances (e.g., nitrous oxide, steroids, etc.). The 14 items on the DUDIT assess the quantity, frequency, and intensity of substance use; symptoms of dependence and tolerance; and consequences related to substance use. Summed scores on the DUDIT can range from 0 to 84. Adequate internal consistency and reliability have been demonstrated (Stuart et al., 2003; 2004; 2008).

Data Analysis

All statistical analyses were conducted using SPSS version 18.0. We first examined descriptive statistics among study variables and bivariate correlations among study variables and covariates. We next conducted *t* tests for independent samples to determine whether there were any gender differences in study variables or covariates. To examine whether EMS domains were associated with MDD and GAD symptoms above and beyond substance

use and demographic covariates, hierarchical multiple regression analyses were conducted in two steps. In the first model, six variables were entered as predictors of symptoms of MDD: age, gender, years of education, alcohol use, drug use, and symptoms of GAD. In the second model, all five EMS domains were added as predictors. This same analytic strategy was then repeated for symptoms of GAD.

Results

Descriptive Statistics

Table 1 presents means, standard deviations, and bivariate correlations among study variables. All EMS domains were positively and significantly associated with each other. Alcohol use and drug use were negatively and significantly associated with each other. Symptoms of MDD and GAD were also positively and significantly associated with each other. Alcohol use was positively and significantly associated with the EMS domain of *impaired limits*. Drug use was positively and significantly associated with the EMS domains of impaired autonomy and performance, impaired limits, overvigilance and inhibition, and *other directedness*. Symptoms of MDD and GAD were positively and significantly associated with all EMS domains.

Results from the independent samples *t* tests are presented in Table 2. Results showed that females reported significantly greater past year drug use, more symptoms of MDD and GAD, and higher scores on the EMS domains of disconnection and rejection, impaired autonomy and performance, other directedness, and *overvigilance and inhibition* compared to their male counterparts. We therefore included gender as a covariate in the remaining analyses.

Regression Analyses

We next examined whether EMS domains were uniquely predictive of symptoms of MDD (Table 3). The first model accounted for 49% of the variance in symptoms of MDD. Specifically, alcohol use, drug use, and symptoms of GAD were significant predictors of symptoms of MDD. In the second model, the five EMS domains were entered as additional predictors. This second model accounted for 63% ($R^2 = .14$) of the variance in symptoms of MDD. Specifically, drug use, symptoms of GAD, and the EMS domains of *disconnection and rejection* and *impaired limits* significantly predicted symptoms of MDD.

The same data analytic strategy employed above for symptoms of MDD was also employed to examine EMS domains as predictors of symptoms of GAD. The first model accounted for 48% of the variance in symptoms of GAD. Specifically, gender and symptoms of MDD were significant predictors of symptoms of GAD. That is, being female was associated with greater GAD symptoms. In the second model, the five schema domains were entered as additional predictors. This second model accounted for 63% ($R^2 = .15$) of the variance in symptoms of GAD. Specifically, symptoms of MDD and the EMS domain of *impaired autonomy and performance* were significant predictors of symptoms of GAD.

Discussion

Previous research has documented the enormous problem of substance use disorders and the risk for heightened relapse and substance use problems among individuals with co-occurring Major Depressive Disorder (MDD) and Generalized Anxiety Disorder (GAD). Moreover, early maladaptive schemas (EMS) have recently been investigated among individuals in substance use treatment, and it is theorized that EMS underlie the development of mental health disorders and thus could be responsible for the high comorbidity seen between substance use disorders and MDD/GAD. We examined the relationship between EMS, symptoms of MDD, and symptoms of GAD among adults seeking residential treatment for substance use disorders.

Our first hypothesis, which stated that symptoms of MDD would be uniquely associated with the EMS domain of *disconnection and rejection*, was supported. That is, the EMS domain of *disconnection and rejection* was associated with symptoms of MDD even after controlling for age, gender, years of education, alcohol and drug use, symptoms of GAD, and the remaining four EMS domains. Additionally, the *impaired limits* EMS domain was also associated with greater MDD symptoms. When considered alongside past work (e.g., Cámara & Calvete, 2012; Schmidt et al., 1995), these results suggest that the *disconnection and rejection* domain is particularly relevant to symptoms of MDD. This makes theoretical sense given that this EMS domain describes many of the core thoughts, feelings, and behaviors/reactions of people who are prone to experiencing symptoms of MDD. More specifically, this EMS domain is characterized by feelings and beliefs of being “defective,” social isolation, and intense fears that other people will abuse and/or abandon them (Young et al., 2003). Thus, individuals with this core, maladaptive way of viewing the world and other people may be more prone to experience symptoms of depression.

We note that the *impaired limits* EMS domain remained associated with MDD symptoms in the regression model. It is possible that individuals higher in this domain are more prone to depressive symptoms due to their chaotic, often unstable and socially disrespecting interpersonal style (Young et al., 2003), which may leave them more prone to social isolation and low social support. It is also possible that MDD symptoms resulted in an increase in the *disconnection and rejection* and *impaired limits* EMS domains. However, research has demonstrated moderate to high levels of stability of EMS in depressed patients (Riso et al., 2006) which may suggest that MDD symptoms may be less likely to influence EMS than vice versa.

Our second hypothesis, which stated that symptoms of GAD would be uniquely associated with the EMS domain of *impaired autonomy and performance*, was supported. That is, the EMS domain *impaired autonomy and performance* was associated with symptoms of GAD even after controlling for age, gender, years of education, alcohol and drug use, and symptoms of MDD. Considered alongside past work (e.g. Cámara & Calvete, 2012; Schmidt et al., 1995), these results suggest that the EMS domain of *impaired autonomy and performance* is particularly relevant to symptoms of GAD. Again, this finding makes theoretical sense given that EMS within the domain of *impaired autonomy and performance* describe many of the core thoughts, feelings, and behaviors/reactions of people who are

prone to experiencing symptoms of GAD. That is, this domain is characterized by beliefs that one will be unable to survive, separate, perform successfully, and function independently from other people, and that they are vulnerable to bad things happening to them which they are unable to prevent (Young et al., 2003). Given that some of the core features of GAD is excessive worry about several life circumstances, such as health, relationships, and work (American Psychiatric Association, 2000), it would make theoretical sense that individuals with the core EMS of *impaired autonomy and performance* may be prone to symptoms of GAD.

Implications and Directions for Future Research

There are a number of avenues for continued research on the relationship between EMS and MDD and GAD among individuals with substance dependence. First, given that these EMS only accounted for 14-15% of the variance in symptoms of MDD and GAD among substance dependent individuals, future work is needed in which researchers examine the developmental trajectory between EMS and symptoms of MDD/GAD. For example, longitudinal research would allow for a better understanding of whether *impaired autonomy* precedes and increases the risk for GAD, and whether *disconnection and rejection* and *impaired limits* precedes and increases the risk for MDD, among individuals with substance dependence, which would be consistent with EMS theory (i.e., Young et al., 2003). That is, are EMS an underlying mechanism responsible for the high comorbidity between substance use disorders and MDD/GAD? It is also possible that other factors account for the relationship between EMS and MDD/GAD; that is, that other, proximal variables may mediate this relationship. Theoretically, EMS are believed to develop in early childhood and, thus, are more distally related to mental health. Other factors which may be more proximally related to symptoms of MDD and GAD, such as emotion dysregulation, self-efficacy, and distress tolerance may mediate the EMS-psychopathology relationship. Additional work is needed to examine these possibilities.

This study and others raise the question as to whether substance use treatment could be improved by targeting EMS. For instance, it may be beneficial for treatment providers to include an assessment of EMS to determine whether they are contributing to symptoms of MDD, GAD, and substance use. Cognitive-behavioral techniques could then be implemented to target EMS that are most relevant to each individual (e.g., *impaired autonomy* for individuals with GAD), such as cognitive restructuring, problem-solving, and behavioral activation. Young and colleagues (2003) provide a detailed outline of how to treat EMS from a cognitive-behavioral perspective, and initial research supports this approach in reducing EMS and improving associated mental health outcomes (Jacob & Arntz, 2013; Renner, Arntz, Leeuw, & Huibers, 2013; Sempértegui, Karreman, Arntz, & Bekker, 2013). Ball (1998; 2007) has also outlined a protocol to target EMS within the context of substance use treatment, which has received some empirical support (Ball, 2007).

Limitations

First, due to the cross-sectional nature of the study design, no causal inferences can be made. Longitudinal research is needed that examines the relationship identified in the current study. Second, the facility where charts were reviewed does not conduct structured

diagnostic interviews and this may somewhat reduce confidence in the participants' substance use diagnoses. The scoring method used for the YSQ-L3 in the current study, although consistent with prior research with substance use patients (e.g., Shorey et al., 2013c), is one of many ways in which the YSQ-L3 can be scored. Unfortunately, the chart review nature of the current study only allowed us access to total scores on the YSQ-L3, and thus we were unable to score the YSQ-L3 using different scoring methods. Future research should employ different scoring strategies (e.g., summing all items based on raw scores) and determining whether this impacts findings. Further, the results of this study may not be generalizable to non-substance use treatment seeking populations. Moreover, this study included a sample of mostly non-Hispanic Caucasian individuals, which limits generalizability to more diverse populations. Finally, our sample size was relatively small, which precluded the examination of all 18 individual EMS. Future research should employ larger samples which would allow for the statistical power to examine all 18 individual EMS simultaneously.

Conclusions

In summary, we examined the relationship between EMS and symptoms of MDD and GAD among individuals seeking treatment for substance dependence. Our results demonstrate that the EMS domains of *disconnection and rejection* and *impaired limits* were associated with symptoms of MDD, and that the EMS domain of *impaired autonomy and performance* was associated with symptoms of GAD. In the context of the limitations discussed, these findings provide a step toward a better understanding of the role played by EMS in the symptoms of MDD and GAD among individuals with a substance use disorder. It is plausible that EMS are an underlying mechanism for the comorbidity between substance use disorders, MDD, and GAD.

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Table 1

Bivariate Correlations, Means, and Standard Deviations among Study Variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Alcohol Use	---										
2. Drug Use	-.45***	---									
3. Generalized Anxiety Symptoms	.09	.36***	---								
4. Depressive Symptoms	.19*	.37***	.63***	---							
5. Disconnection and Rejection	.20	.19	.49***	.55***	---						
6. Impaired Autonomy and Performance	.16	.25*	.65***	.56***	.76***	---					
7. Impaired Limits	.27**	.22*	.42***	.54***	.53***	.58***	---				
8. Other Directedness	.20	.21*	.52***	.48***	.68***	.67***	.67***	---			
9. Overvigilance and Inhibition	.16	.23*	.47***	.47***	.68***	.67***	.68***	.80***	---		
10. Age	.24**	-.58***	-.21*	-.11	.06	.10	-.04	.00	.02	---	
11. Years of Education	-.05	-.10	-.07	.01	-.07	-.09	-.09	.00	.03	.16	---
Mean	14.95	14.88	4.66	8.54	56.30	29.08	30.53	57.92	68.31	37.36	13.71
SD	12.23	14.37	3.92	5.08	71.71	35.30	29.52	53.53	60.57	12.47	2.39

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

Table 2

Differences between Males and Females on Study Variables.

	Males		Females		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Age	37.79	12.46	36.48	12.60	.55
Years of Education	13.55	2.34	14.05	2.48	1.07
Alcohol Use	15.02	11.73	14.80	13.35	.09
Drug Use	13.06	13.69	18.67	15.15	2.06*
Depressive Symptoms	7.90	4.98	9.97	5.06	2.06*
Generalized Anxiety Symptoms	3.76	3.66	6.66	3.77	3.91***
Disconnection and Rejection	43.50	60.15	85.44	87.16	2.71**
Impaired Autonomy and Performance	18.03	25.36	54.24	41.80	5.20***
Impaired Limits	27.42	27.76	37.62	32.59	1.56
Other Directedness	46.00	42.72	85.06	65.47	3.46**
Overvigilance and Inhibition	57.68	51.10	92.51	73.37	2.66**

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

Table 3

Hierarchical Regression Analysis Examining the Unique Variance in Symptoms of Major Depressive Disorder Attributable to Early Maladaptive Schemas.

	B	SE	β	R²	F
Model 1				.49	17.39***
Age	.06	.03	.14		
Gender	-.75	.81	-.07		
Years of Education	.19	.15	.09		
Alcohol Use	.12	.03	.31***		
Drug Use	.15	.03	.42***		
Generalized Anxiety Symptoms	.65	.10	.52***		
Model 2				.63 (R ² .14)	12.06***
Age	.04	.04	.08		
Gender	-1.17	.97	-.10		
Years of Education	.26	.15	.13		
Alcohol Use	.06	.04	.16		
Drug use	.09	.04	.23*		
Generalized Anxiety Symptoms	.67	.13	.51***		
Disconnection and Rejection	.02	.01	.27*		
Impaired Autonomy and Performance	-.01	.02	-.04		
Impaired Limits	.04	.02	.25*		
Other Directedness	-.01	.01	-.07		
Overvigilance and Inhibition	-.01	.01	-.09		

** $p < .01$

* $p < .05$

*** $p < .001$

Table 4

Hierarchical Regression Analysis Examining the Unique Variance in Symptoms of Generalized Anxiety Disorder Attributable to Early Maladaptive Schemas.

	B	SE	β	R²	F
Model 1				.48	16.05***
Age	-.04	.03	-.11		
Gender	2.20	.62	.26**		
Years of Education	-.14	.12	-.08		
Alcohol Use	.01	.03	.02		
Drug Use	.02	.03	.07		
Depressive Symptoms	.42	.07	.53***		
Model 2				.63 (R ² .15)	11.86***
Age	-.03	.03	-.08		
Gender	.88	.74	.10		
Years of Education	-.11	.12	-.07		
Alcohol Use	.02	.03	.05		
Drug Use	.02	.03	.05		
Depressive Symptoms	.38	.07	.51***		
Disconnection and Rejection	-.01	.01	-.17		
Impaired Autonomy and Performance	.04	.01	.41**		
Impaired Limits	-.02	.01	-.17		
Other Directedness	.01	.01	.15		
Overvigilance and Inhibition	.01	.01	.01		

**
 $p < .01$

***
 $p < .001$